Master's thesis

Evolution of Urban Culture and Urbanization in Finland and Japan

フィンランドと日本における市街文化と市街化の変遷

Kaupunkien ja kaupunkikulttuurin kehitys Suomessa ja Japanissa

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Abstract

Today, urban planning has become an important discipline all around the world, and yet urban planning and development vary enormously between nations. This must be, for the different cultures define us. We are born into them, raised in them, we learn from them, and we spend our entire lives in them. Thus, it also follows that the local culture is a key element in urbanization and urbanism, leaving its imprints all over the urban fabric.

But cultures are not stable at all. They are constantly under strain by their surroundings, and by themselves. They reinvent themselves with every passing moment, and this is what is known as cultural evolution. Thus, to better understand the urban cultures of today, this thesis is an inquiry into history and evolution of urban cultures, urbanization and urban planning of two very different nations, Finland and Japan. Side-by-side, these two vastly different stories reveal novel insights into urbanization.

This work is divided into two parts; The first part lays the groundwork for the second part by introducing the background for the thesis, a quick look into what culture is, and into one of its core constituents, language. The second part is a historical narrative from the late medieval period to modern age, which lays Japanese and Finnish urbanization and urbanism side by side for comparison, showing just how culture has evolved in these two nations that are so different, and yet at the same time, so very alike. Using these similarities and differences, suggestions of universal features of cultural evolution and urbanism are then presented.

Cities have come to stay. Grouping together and moving into cities was one of the major steps in development of human civilizations. Today, as the world is growing ever more urban, it is vital to understand how people act and take part in public processes, such as urban planning. An important part of this understanding can be achieved via examining the prevalent cultures, for they have quietly directed the actions of us all. This has been so ever since the first of cities, and is highly likely to be so forevermore.

Keywords: history, urbanization, cultural evolution, urban fabric, cities, Finland, Japan

要約

都市計画は、世界各地で重要な位置付けにある。それにもかかわらず、都市計画や街の発展は民衆によって多様に変わりゆく。なぜなら、文化は我々を写す鏡であるからだ。我々は地に生まれ、そこで育ち、学び、そして人生のあらゆる時間を過ごしてきた。つまり、文化には街の成り立ちが映されているため、文化を紐解くことは、市街化やアーバニズムを辿る手掛かりになると考えられる。

しかし文化は移り変わり、常に文化そのもの、そして周辺環境から影響を受けている。文化は時とともに再編しており、これはまさに文化の進化といえるだろう。それ故、今日（こんにち）に至る市街の文化を深く理解するため、本論はフィンランドと日本の歴史、文化の変遷、市街化、都市計画を探求する。大きく異なる二国を照らし合わせることで、市街化の洞察を導く。

本論は二部構成である。前半は、後半の基礎となり、本論の背景、文化とは何か、また文化の中核要素の一つとなる言語の影響を振り返っている。後半は、中世後期から現代に至るまでの歴史を紐解いている。フィンランドと日本の市街化を様々な側面から比較しており、どこか似ていてどこか似つかない二国の文化の進展における相違点と類似点を導いている。

市街は人が存在する限りなくなることはない。人の集積や市街化は、人類の文明における主たる前進である。今日（こんにち）、世界各地で市街へと刻々と変容していく中で、都市計画にみられるような人間の行動や共生する過程の理解は不可欠である。本論は、本質的な文化を探求することによって、その行動や過程の根幹を明らかにする。それは文化が我々を穏やかに導いているからだ。市街が誕生して以来ずっとそうであるように、今後もそうあり続けるだろう。

キーワード：歴史、市街化、文化の進化、街並み、都市、フィンランド、日本

Abstrakti

Nykyään yhdyskuntasuunnittelusta on tullut tärkeä julkinen toimi kaikkialla maailmassa, mutta tästä huolimatta yhdyskuntasuunnittelu ja kaupungistuminen vaihtelevat merkittävästi kansakuntien välillä. Tämä juontuu kulttuureista, ja siitä miten ne määrittelevät meitä. Synnymme niihin, kasvamme niissä, opimme niistä, ja elämme koko elämämme niissä. On siis myös loogista olettaa, että paikallinen kulttuuri on avainasemassa kaupunkikehityksessä, jättäen jälkensä ylt'ympäriinsä kaupunkirakennetta.

Kulttuurit eivät kuitenkaan ole staattisia. Ne ovat jatkuvan muutospaineen alla kiitos ympäristönsä sekä itsensä, uusiutuen uupumatta joka hetki. Tätä voidaan kutsua kulttuurievoluutioksi. Tämä tutkielma sukeltaa kahden hyvin erilaisen valtion, Suomen ja Japanin kaupunkikulttuurien historiaan ja kehitykseen ymmärtääkseen paremmin nykypäivän kaupunkeja ja kaupunkirakennetta. Vieritysten nämä Suomen ja Japanin tarinat paljastavat uusia näkökulmia kaupunkeihin, sekä niitten kehitykseen.

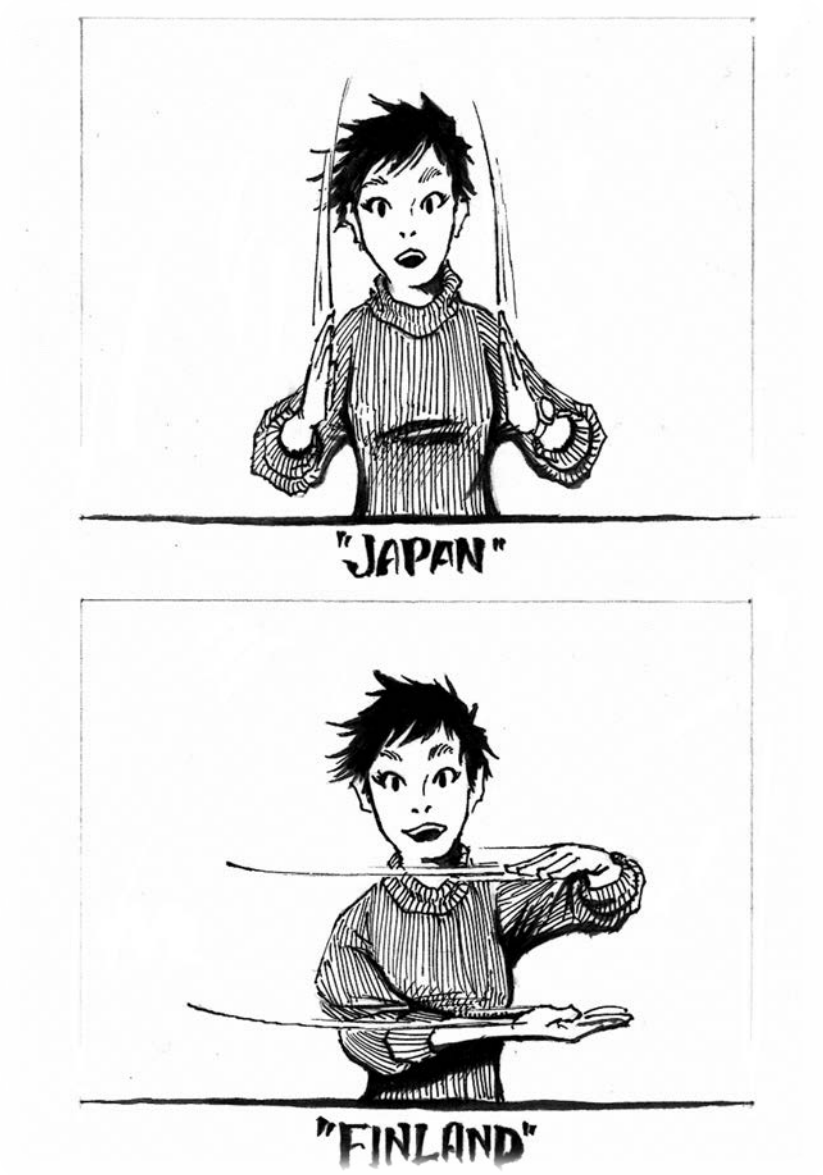
Tutkielma jakautuu kahteen osaan. Ensimmäinen osa toimii perustana toiselle osalle, ja se valottaa tämän tutkimuksen taustaa, pureutuu kulttuurin määritelmään, sekä kieleen, yhteen sen avaintekijöistä. Toinen osa on historiallinen narratiivi myöhäiskeskiajalta nykypäivään, ja se asettaa Suomen ja Japanin kaupunkikehitykset vierivieren. Tämä vertailu paljastaa kuinka näiden kulttuurit ovat kehittyneet niin kovin erilaisiksi, ja kuitenkin niin samanlaisiksi. Lopuksi esitetään ehdotus kulttuurievoluution ja kaupunkikehityksen yleisistä piirteistä käyttäen hyväksi näitä eroja ja samaisuuksia.

Kaupungit ovat tulleet jäädäkseen. Kaupunkien perustaminen ja yhteen kokoontuminen olivat yksi merkittävimmistä askeleista ihmiskunnan kehityksessä. Maailman kaupungillistuessa huimaa vauhtia on äärimmäisen tärkeää ymmärtää miten ihmiset toimivat ja osallistuvat julkisiin toimiin kuten yhdyskuntasuunnitteluun. Oleellinen osa tästä ymmärryksestä voidaan saavuttaa tutkimalla vallalla olevia kulttuureita, sillä ne ovat hiljaisesti ohjaillet meitä kaikkia aina ensimmäisistä kaupungeista saakka, ja luultavasti tulevat niin tekemään aina hamaan tulevaisuuteen.

Avainsanat: historia, kaupunkikehitys, kulttuurievoluutio, kaupunkirakenne, kaupunki, Suomi, Japani

森 寛斎,「葡萄と栗鼠」, (Mori Kansai, *Grapes and Squirrels,*), Meiji 13 (1880) & Halonen Pekka, "*Ensilumi*," 1931 & (Wikimedia Commons)

Foreword



How one of my friends explained Japan and Finland to me; drawn by the author

I first went to Japan right after finishing my military conscription in the summer of 2013. That one year of military service was very intense, and left deep impressions in me. So much so, that back then the idea of going home and losing my place in life once again weighted heavily on me. It was at this point that I was invited to come train in Japan under an old master of martial arts, and the idea of swapping military discipline to martial arts discipline seemed very natural indeed. Further, I already had extensive experience regarding the martial art in question.

So I spent what little money I had left, bought a 17-hour flight ticket to Japan for little over 3 weeks, and left Finland less than a week after ceding my military uniform. Since I had completed all the basic courses of Japanese that were available in my university before my service, I thought myself quite well prepared for the trip. I am happy to say that I was utterly wrong: My Japanese was awful as I had forgotten most of it during the service, and my skills in the martial art had also rusted. I could only watch myself fail in almost everything, and the searing heat of the Japanese summer did not help.

In effect, every day was a wonderful new adventure full of surprises and learning. My teacher had the patience to go through the basics with me time and time again in his living room, using whatever was available to aid in his explanation. Pens and paper, chopsticks and tea mugs, boxes and bottles, and whatnot was literally flying around the room as we were discussing all manner of things. Every day we trained hard for hours, then ate a ton, and talked for the rest of the time. I have no doubt that that trip was at least equally big an influence on me as the one year in the military that preceded it.

Now, one of the most important memories of that trip could even be said to be the very beginning of this work. I was going towards Tokyo from the Narita airport. I had just landed from a cramped 11-hour flight and gone through the immigration process that somehow always leaves me feeling uneasy. I was dozing off in the train, when suddenly one jolt woke me up to a sight of an old, small wooden temple in the middle of Japanese houses pressed so tightly against each other that one could only wonder why they were built separately in the first place. The view lasted only about 5 seconds, with the iconic tangle of powerlines hanging in the air obstructing the view, and then it was gone.

The temple was not a masterful piece of architecture in the least, nor were the surrounding houses any better. In my memory the temple was decrepit, and some of the surrounding houses were badly rusting, and the tangle of wires in the air helps little. Throughout the trip I saw all manner of architecture and urban fabric. Some were new and some old, some colourful and some grey, some big and some small, but for some reason that old decrepit temple remains one of the most vivid images of that trip. In many ways, it was like a representative of the chaotic and unending urban jumble, and a huge question Japan saw fit to present to me.

Personally, I like the organic feel that the Japanese cities have as much as I like the orderly urban forms of Nordic countries. In fact, I cannot place one above the other, for both have their vices and virtues, which are very different in nature. For example, Nordic cities are very organized and tend to look amazing, while the Japanese cities are wonders of public transportation. Finnish cities are built right next to nature with every possible consideration for wildlife, while Japanese cities are much more colourful and varied in scale, shape and function. How does one even begin to weigh one aspect of a city against another?

However, while I cannot rank the two, I can ask the question that old decrepit temple posed to me; *Why?* What caused the two urban cultures to become so different? Why cannot the Japanese, who are so famous for their incredible sense of detail, build with more consideration to the whole? Why cannot the Finnish, famous for their eccentric retreats, build with more relaxed ad-hoc feel? Could the two possibly learn from each other's vices and virtues? Captivated by these questions I started studying urban planning in earnest after returning from Japan, with an aim to do my master's thesis on this subject. Since then I have lived in Japan for almost two years, and been to Japan for so many times I have hard time recollecting each visit.

With each day, week and month spent in Japan my thesis turned heavier and heavier. The research widened, and I lost track of the goal multiple times, and I have no delusions of having solved the riddle I set out to solve. I can safely say that the work has only just begun, and I suspect that I might never solve it satisfactorily. However, I do believe that I have crossed the first threshold, and gained a grasp of the underlying causalities. I understand that my work does not exactly follow the traditional means of inquiry, but nevertheless I ask for understanding on part of the reader, for the object of this work turned out not to be the content but the very context itself.

I will now present what I have learned so far.

Contents

Introduction

This thesis is a discourse on evolution of Japanese and Finnish urban cultures, urbanism and urban planning.

To understand the similarities, differences, and hidden causalities between the two nations, some groundwork must be laid before. This groundwork consists of a short introduction to the background behind this work, a theory of cultural evolution, as well as a short introduction to Japanese and Finnish languages as core components of both cultures. Once that groundwork is in place, we are ready to tell the two stories of urbanization and evolution of urban planning side-by-side, and to pick out the crucial points for closer inspection. Roughly put, can a similar, almost identical, event cause completely different consequences in two different countries, or can two very different events cause almost identical consequences?

First, the methodology of this study will be presented. This section includes the rationale why Finland and Japan are the perfect pair for this kind of comparison between Asia and Europe. This study originally began with a series of semi-structured interviews with students of architecture. Slowly however, the results started pointing in a completely new direction, and while insignificant in terms of the study itself, the interviews are an integral part of the heuristics of this thesis, and thus they deserve to be briefly introduced.

Second, as the fact that the issue lies in the urban culture itself has now established, the theory of cultural evolution is introduced. In addition to cultural anthropology, biology and psychology have also been utilized in this interpretation of cultural evolution. Consequently, this theory relies on terminology and lines of thought that are somewhat unique, and could even be considered unconventional. Thus, such specialized terminology must also be introduced, for such terms might be understood differently, and as such require a short explanation, as I may inadvertently use them differently from their original meaning. Also, as the bulk of the work relies on literature review, the main references are introduced here.

Third, a quick look into language as a key aspect of both cultures is provided. Language is the very foundation of abstract thinking, and thus the special characteristics of each language provide some insight into the culture that uses it. Furthermore, language is not exactly limited to vocal or written words alone, but can also be embedded in all manner of cultural arts, including architecture.

Now, the three pieces of groundwork, the background, the cultural evolution, and culture and language, form a circle that deserves a special mention. While the interviews lead to the idea of general culture playing an important part in urbanization, they were also largely affected by the linguistic nuances. Consequently, one could move in either way from them; either to language, or to the cultural evolution. The same applies to the other two as well, and thus the circle begins anew. To understand one all three must be understood in this circular fashion.

With the groundwork in place we are ready to go 500 years into the past. The bulk of the study is presented as a story of urbanization and development of urban planning in Japan and Finland. The story is presented chronologically, starting from the 16th century, and slowly progressing to modern day from there. A curious detail in this story is the usage of Japanese calendar as the main ‘narrator’ of the story. Japanese history is used mainly to showcase the surprising similarity of the historical developments in the two nations, even though the causes were very different.

At the end of the historical narrative, the two systems are then presented shortly, together with some of the special characteristics of the systems. We cannot embark on a full-scale examination of the systems however, as urban planning as an institution is an incredibly complex network of political, economic, legal and social actors. Uncountable books have been written on just the subject of one nation's urban planning. Thus, we must be content with a simplified version.

In the last part, the main findings are brought up for discussion. These findings include some nation-specific points, Finland-Japan comparisons and finally ones that could well be global phenomena. Finally, conclusions are derived, and the thesis is brought to a close. Lastly the full reference list is presented.

The Inquiry Itself; Methodology

"[…] 妙は形無く、言語のも述べられず、有にもあらず、無にもあらず、思案の及ばぬ処なり。百億の言をも説得る事あらん、　若し、説得るべきは妙にあらず。[…]"

"[…] 妙 (*myō;* tacit) *has no form, and it escapes description; it is not something, and yet it is not nothing either; it is beyond conscious thought. Even 10 billion words cannot provide an explanation to it, for if they did, we would not call it 妙. […]"*

Nagaoka Fusashige (長岡房成), 18th century

The main objective of this study is the comparison of evolution of urban culture in Japan and Finland. This comparison can not only provide some insight into hidden causalities within the evolution of urban culture, but it is also a fair comparison of Eastern and Western urbanization. In this thesis this comparison is achieved via narratives of the histories of urbanism in the two cultures told side-by-side. In this chapter I will argue why Japan and Finland are the perfect pair for this kind of comparison, as well as introduce why urban culture and cultural evolution became the centre of this discourse.

However, before we delve further into the study itself, it is paramount we establish the very core of this work; the question we aim to answer. Without that in mind, we are grasping at straws in dark, unable to make any progress. While the core themes have been framed in a manner that moves naturally from one to the next, in broad strokes the general question is;

"What can we learn from placing two very different urban fabrics, arguably the culmination of urban governance, next to each other and comparing them over several centuries?"

Following this line of thought, *could the similarities and differences then reveal otherwise hidden causalities of cultural evolution to us?* This is the ambitious goal of this discourse. In fact, it is arguably overtly broad and ambitious, which is why the themes must be framed more specifically.

First, the inquiry must begin with the systems and institutions concerned. Second, the inquiry must begin centuries ago, for the comparison is incomplete without the historical background. In fact, for this discourse, the current state of the systems is meaningless without the context in which they developed. Nothing is without a cause, and not understanding that cause is the same as not understanding. This view of systems in relation to the environment they have developed in has deep roots in both natural sciences, as well as in humanities, and will be presented fully in the next chapter.

Third, once the actors have been introduced, and the narrative established, we can move on to comparing the two. Were there similar events that turned out differently, or where there completely different events that somehow turned out just the same? Answering that question leads us to the fourth, and final one: What can we learn from the comparison?

Thus, the central themes of this study are framed in the following manner:

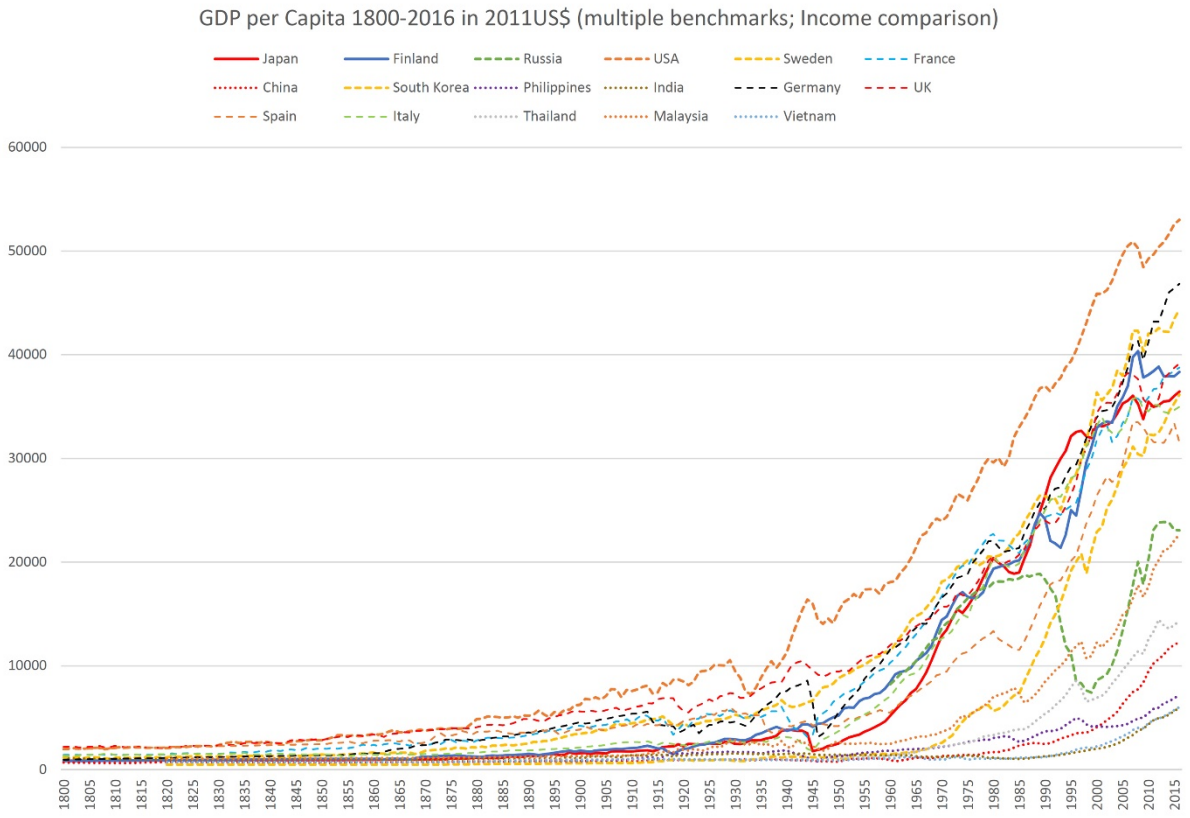
- What are the systems of urban planning in Finland & Japan?
- How did the two urban cultures come to be?
- What do they have in common, and are there any significant differences?
- Is there something to be learned from the comparison, such as similar aspects of history that produced completely different outcomes?

Finland & Japan

There is one question that must be answered before we can go any further: Why Finland and Japan?

Indeed, at first it may seem like an odd pair for a meaningful comparison. However, in many aspects the two are as close to each other as western and eastern nation can be. Not only that, they are more alike than Finland and some other European countries, or Japan and some other Asian countries. In other words, Japan and Finland are not only the best possible pair chosen from two separate groups, they are in fact more alike than they are with some of the other candidates within their own groups. Thus, for a comparison of eastern and western urban cultures, Finland and Japan are an ideal pair, a happenstance almost too good to be true.

Big words need big supports. However, I do not want to spoil the entire story that is to come, and will thus ask the reader to refer to the historical narrative in case of historical similarities. Nevertheless, I do not aim to leave the reader without some credible proof of the similarities. First, Table 1:



GDP per Capita of different European and Asian nations (Maddison Project, 2018)

Table 1 represents the development of GDP per capita in 2011 international United States Dollars in most major western and eastern nations starting from 1800. The solid lines are Finland (blue) and Japan (red), while the dashed lines represent western nations, and the dotted lines eastern ones. Naturally, as the powerhouse of world economics United States is head and shoulders above everyone else. Japan is also clearly in a different league with other Asian nations, while Finland is much closer to the rest of the European nations. However, Finland is separated from the rest by the fact that its economic development begins much later than most other European nations. Until 1930's, Finland has the lowest GDP per Capita of them all, around half of where the rest are.

More importantly, Japan and Finland are so close to each other, that without the different timing in ups and downs they would be close to identical. Further still, the serious economic development begins in both countries roughly at the same time; in the beginning of 20th century. This is in stark contrast to other European nations, that are well underway with the industrial revolution in the middle of 19th century, or other Asian nations that start their serious economic development as late as 1960's or 1970's. Finally, it is remarkable how the two curves seem to almost mimic each other; even when one drops, it soon meets with the other.

This similarity is a major factor, as the income one receives translates to an almost universal standard of living, no matter where one lives in the world. Proof of this is given by the Dollar Street project, which has been developed by Gapminder (Dollar Street, 2018). Even though Japan nor Finland are not included in the dataset, data from over 50 different countries and from 263 different households clearly shows that nationality means much less than income level in terms of livelihood. Thus, it seems fair to assume that very similar choices and options should be available to both Japanese and Finnish alike in terms of dwellings, and everyday life.

Another minor reason for this pairing is the distinct similarity in cultural ideals. This does not mean that the cultures are even close to each other; Finnish culture is at least as distinctly different from Japanese culture as it is from Swedish or Russian culture. Likewise, Japanese culture is at least as distinctly different from Finnish culture as it is from Chinese or Korean culture. However, both cultures value simplicity, solitude, serenity, silence, honesty, self-discipline and self-restraint to a degree that is quite rare in other cultures. For instance, I have ever heard of only two countries in the whole world where you can leave your wallet in the middle of the street in broad daylight and fairly expect to get it back by the end of the day; Japan and Finland. Likewise, I have never seen pedestrians waiting for the lights to turn in the middle of the night with absolutely no cars in sight except in Finland and Japan.

The major difference is that Finnish have always been free to be very straightforward, even when it would be considered rude in most other cultures. This is in stark contrast with the Japanese culture, which encourages silence and acceptance in face of superiors, even when the other party is being extremely rude or unpleasant. Nevertheless, this similarity in ideals plays a part in the urban culture as well, and thus creates additional charm for this pairing. Further, both cultures are recognized worldwide as being quite eccentric, albeit for quite different reasons.

The biggest similarity between the two however, is in their histories. A hint of this is already provided in Table 1, but the true similarities will become apparent with the historical narrative. The story of the two nations is the most powerful argument for this pairing I can think of, and as it constitutes the bulk of this discourse, I plead patience from the reader.

Choice of Methods

Two different methods of inquiry were utilized during this work; semi-structured interviews in the very beginning, and literature review after that.

The semi-structured interviews were conducted to better understand the dominant image of urban planning in the two nations; how people understood and experienced the institution of urban planning. Naturally, any kind of interviews are highly qualitative, and depend on uncountable factors. As such, they do not constitute hard evidence unless there are hundreds upon hundreds of them. Instead, in this work they are used in heuristic fashion, giving us glimpses and ideas into how the current systems and urban planning as an institution are experienced.

In turn, literature review is the only means for charting the past. While it would technically have been possible to conduct interviews with different age groups, the evidence would have been highly unreliable. After all, due to what is called "cognitive ease," we tend to rely on aspects such as "*familiarity,"* or *"it just feeling right,"* and the like when remembering and assessing truthfulness of a statement or a memory (Kahneman, 2012). If need be, we can even create memories of events that never took place! The technical term is *"confirmation bias."* Thus, history lives on in hard evidence, in relics and paintings, in letters and books, in documentation. Interpreting these remains is a grand branch of science in its own right, and quite rightly so.

The last important technique utilized in this thesis is the compilation of the historical evidence into a coherent and credible narrative. The reason for this presentation is that good narrative has the power to provide an intuitive understanding of the actors and their motives. Facts alone, especially when inspected one by one, do not provoke identification with the ongoing events. Instead, it is the narrative, the flow from one moment to next, that accomplishes this.

Architecture & Culture?

This work originally started out as an inquiry in to the detailed systems of urban planning in Finland and Japan. However, after an initial study of the systems, the story seemed to lack a certain kind of key to unlock the real message, and it became clear that a more human perspective was missing. Forgoing the expert knowledge on what urban planning is supposed to be, a set of semi-structured interviews were conducted with advanced students of architecture to better understand the "primitive" view both nations held. In the words of Machiavelli;

> *"[…] But, it being my intention to write a thing which shall be useful to him who apprehends it, it appears to me more appropriate to follow the real truth of the matter than the imagination of it; for many have pictured republics and principalities which in fact have never been known or seen, because how one lives is so far distant from how one ought to live, that he who neglects what is done for what ought to be done, sooner effects his ruin than his preservation; […]"*
>
> Machiavelli, *The Prince*

The most important question was, do different cultures view the institution of urban planning differently? Understanding the feelings people have about it is paramount, for such feelings constitute the core of public participation as an institution. If people believe themselves powerless, they will be so even in a system that gives them all the power. On the other hand, if people believe themselves entitled to power in a system that tries to take it all away, they are highly likely to tear down the whole system. History is full of examples of both cases (Graeber, 2014). It was with this motivation in mind that the interviews were conducted, and the results turned out to be rather surprising, and redirecting this work in a completely new direction.

The first of these surprises came with the first question, "What is architecture?" The question was originally introduced as a simple warm-up exercise for the rest of the interview, but in the end it provided some of the wildest responses. Although several Finns expressed similar feelings, it was especially the Japanese to whom people seemed to create architecture instead of a place or structure. The essence of this idea is that architecture itself is not tangible, but something ethereal, spiritual even instead:

The Structure of the Interviews; The Questions

1. *Explain "Architecture" in your own words?*
2. *What is Urban Planning?*
    a. *How much have you studied (academically) Urban Planning?*
3. *Has there been any Urban Planning activity near your home?*
    a. *If yes; has your family or have you taken part?*
    b. *If not; do you know of any urban planning projects in depth?*
4. *How do you feel about Japanese/Finnish towns and Cities?*
    a. *Worldwide, have you ever experienced an extraordinarily good "City" or "Town?" Where?*
    b. *What about Japan/Finland?*
5. *How much do you know about Politics?*
    a. *How do you feel about the Japanese/Finnish in general?*
6. *Which one do you prefer, Freedom or Restrictions?*
7. *Then, do you think Urban Planning necessary?*
    a. *Why do you think so?*
8. *Who should make the decisions concerning Urban Planning?*
    a. *Do you know who is making those decisions now?*
9. *Is there something you still want to tell me?*

'Hidden' Questions

1. (Both) *What foreign Countries have you visited?*
2. (to Japanese) *What is "Machizukuri," and does it differ from "Toshi-keikaku?"*
3. (to Japanese) *Would you consider outdoor spaces architecture (in any case)?*
4. (to Finnish) *What is the relation of Architecture and Landscape Architecture?*
5. (to Finnish) *Is Urban Planning the same as Urban Design? How do the two relate?*

The structure of the Semi-structured interviews

"[…] (Interviewer; What is architecture?)

What is architecture? Can I say anything?

(Interviewer; Yes)

…the bare minimum that is needed to live, in terms of human life… I wonder, is it really a thing?

(Interviewer; Can you elaborate?)

When I say the bare minimum, I mean what is needed to just barely stay alive, aa… For example, to confine themselves, something that the community can use to protect themselves, or maybe not protect, but more like something around which it can form upon... Hmm, for example, a community and an empty clearing with nothing in it; though people can enter, that is a very temporary thing, that just happens. I mean, like, culture, or tradition, or atmosphere doesn't happen, or that it is very difficult for them to happen there, and it is against this, that architecture… Or, towns or… Ah! Wait, it's the other way around.

Although it was originally a clearing, I think people took it and, well… made a settlement, or not really a settlement, but more like… thought that if there was a, like a chair, then people would go to it, and all kinds of activities would take place. As a result, that system then gradually gave birth to architecture, wouldn't you think?

That means, that architecture isn't actions or deeds anymore, but instead that bare minimum, for that community, to protect culture, it's something like a shelter for these…

Yes, a place of beginning, for culture, or for tradition, or, yes, the birthplace of a community… […]"

"[…] （会見者；建築は何ですか？）何ですか？それは、何でも良いの？（会見者；うむ）必要最低限な、必要最低限な生きるための、人が、人が生きるための…　何だろうなぁ、物かな。（会見者；もうちょっと詳しく？）必要最低限って言うのは、本当に、ギリギリ生きるためのかぁ、例えば、限られたためで、コミュニティ、を守ることが出来る様な、守るか、形成する、ことは出来る様な…　何か、例えば、何も無い広場とかでも、コミュニティ産まれるし、コミュニケーション産まれるし、人入れるけど、でもそれって、凄く、テンポラリーの物、成ってしまって。それって、文化とか、伝統とか、風土とか、は産まれない、生まれにくい、に対し、そこに建築…　とか、街とか、あぁ、逆だ。もともと広場だったんだけど、人々が、その、何だろう、コミュニケーション取ったり、そこに、…集落のような、集落じゃねえ、違うなぁ、何と言うんだろう、そこに、何か、椅子あろうと思ったり、その、人の活動、行為の、色んな行為を行わって行く過程で、結果的に建築ってのが徐々に出来始めたと思うんだよね。でごとは、もう、その建築が、行為とか、活動の結果だし、それって本当に必要最低限な、必要最低限、そのコミュニティだったり、文化を守る為の、シェルターみたいな物が出来てるのかなぁ…　拠り所みたいな。…拠り所は、その文化とか、伝統の始まりとか、そうだね、コミュニティの拠り所… *[…]"*

The other end of the responses heavily stressed the physical structure, with the shortest response being essentially; *"A roof. You cannot have architecture without a roof."* However, even for the other half of the interviewees who found architecture only in built structures, architecture itself as a concept still seemed to imply some form of human dimension as well. In other words, there can be no architecture without a human for whom it is built, nor without a human being experiencing it.

This seems logical enough, as the more people there are, the more intensely the idea can develop. This type of thought is not without its strong advocates: Jan Gehl among others has written about the intensity of life between buildings; how good and pleasant outdoor spaces create a virtuous cycle of positivity, as people invite more people to the scene (Gehl, 2006). It then naturally follows that the more people live in a certain area, the more intense their interaction is going to become. The only question is, does the environment offer pleasant enough spaces for the interaction to develop in the first place.

Views on urban planning brought out a clear difference in tone between most Japanese and Finnish interviewees. Essentially, urban planning is not as wide and diverse a subject for the Japanese as it is for the Finnish. Part of this is due to the nature of the planning systems; Finland has one of the most

rigorous and comprehensive planning systems in the world, while the Japanese system is in fact quite lax, and in some places freeform even. Another striking fact is that in larger Japanese universities urban planning is not even under the faculty of Architecture, but under the faculty of Urban Engineering instead. Ultimately, Japanese urban planning consists of little else than designing the infrastructure network, a fact which many Japanese experts also acknowledge (Watanabe, 2007) (Sorensen, 2002) (Ushio, 2005). The views of the Japanese students did *not* agree with this idea, but they were nevertheless certainly more restricted than the Finnish views.

Much more importantly, the interviews also revealed that the terminology, concepts and ideas regarding urban planning rested mostly on shaky foundations. Neither Japanese nor Finnish students on a whole knew exactly what urban planning was. In fact, most of them were not even close. An illustrating detail is that there were some interviewees in both samples who had real-life experience of working in urban planning for some time, and still struggled with the definitions. Although this may have been because most interviewees were thinking about the relationship of urban planning and singular architecture, this was nevertheless an alarming result. Take this excerpt from one of the Japanese interviewees pondering who makes the restrictions and regulations regarding urban planning. The project in this conversation is a traditional architectural image preservation project of an old village in which the interviewee took a big part in;

> *"[…] …but that's why I think that restrictions are good. Of course, freedom is also needed, but if it's one or the other…, I mean it really cannot be just one or the other. I mean, there's a balance. Of course, I think it is important that the government people tell you where the line is, how far you can go, and what is forbidden. That's their job, isn't it?*
>
> (Interviewer; So then, who decides these rules?)
>
> *Well, ultimately it must be the administration, right? I mean, if the eminent people don't make them, then the people will, will… well, of course it would be best if everyone could just agree that "let's do it this way* [A clap of hands]*, but, that's probably impossible* (laughs)*, because it's really difficult to get everyone to agree on something. But, I think everyone has a different idea where the line is drawn, what is forgivable and what isn't, so it is important to come together, and discuss that line properly. Even though the ultimate decision is made by eminent persons of the administration…"*
>
> *…I think that's it. Or maybe, yes, I think it is also okay if it comes from the citizens themselves. I mean that if a person who can make the decision with everyone emerges from within the citizens, that would be really good too…*
>
> (Interviewer; But then, for example in *[the project]*, in the issue of roofs; wasn't there some kind of outside definition for what is acceptable and what isn't settled upon? Something concrete?)
>
> *Against the rules? Wait a minute, nothing was decreed in any law or rules.*
>
> (Interviewer; Is that so?)
>
> *That's the difficult part! Just like I said, that's not decreed by law. Thus, in reality, it is okay to do it, to build any kind of roof, but, because it was decided together that that should stop, it is almost like impossible to break that rule. And it's not like if you do that, everyone would be like "then, you're a criminal!" or anything, at least in [the project] that was. That's why it is seems so difficult. It's not decided as a law, but as some form of a rule. That's why I'm not sure what to say… […]"*

"[…] …でも規制はだから絶対良いと思う。でも、自由のめもちろん要るから、どっちとは確か、どち、全部どっちっては絶対言えないと思うけど、そのバランスって言うのをむしろガバーメントの住民人達が、じゃ、どこまでは良いよね、どこまでダメだよね、って言うのを話すべきかなって思う。（会見者；でもやっぱり、そのルールはだれか決める？）最終決定もちろんやっぱり行政だと思う、それは、やっぱ上の人を決めないと、皆が

多分、多分、もちろん一番いいのは皆が「これで行きましょう」*[手を叩く]*、だけど、多分無理だと思ってそれも、*（笑）*全員が意見を賛成させるのはやっぱ難しいとこがあるから、でも、どこは許せて、どこは許せないっては皆あると思うから、そのラインだけはしっかり話し合うべきかなって言う。でも最終決定するのは行政。でありもっと上の人とか… って思うかな〜。それがでも、そうね、住民から出ても良いのかなと思う。住民でそうやって決める人が出てくるのも全然良いのかなと思うし…（会見者；でもやっぱりそこには、何か、まぁ、例えばその[プロジェクト]は、やっぱりその屋根のことは、もう法律的に「これはダメ」、誰か、何か、そこから以外の　本当にこの様な屋根を作るのは、本当に何か違犯でしょう？）違犯？でも、法律だっては決まってない（会見者；あぁ、そうか。）だから、そこは難しい。そこは[会見者]にまさに言ったよね、法律は決まってないから、本当は、本当は実際やっても良い、けど、でも自分達で辞めときましょうって決めたから出来ないみたいな。だから、例えばそうやったから、「じゃ、お前はもう、有罪だ！」みたいなことには成らなくて、実は、[プロジェクト]では。だから難しいみたいな。法律では決まってない。でも、何か、ルールでは決まっているみたいな。だからどうしたらいいのかは分からない。 *[…]"*

The grass seemed to be greener on the other side of the fence in other interviews as well. When the system allows for a great degree of freedom, the idea of a stronger restrictions, and a guidance system tends to become more and more enticing. While the exact responses for freedom and restrictions were almost exactly 50-50, most Japanese expressed concern for the uniform (chaotic) street image of Japanese cities; a typical urban scene could well be from any of Japan's numerous big cities. Unique and holistic streetscapes are few and far between in Japan. The fact that most interviewees mentioned Kyoto, and only Kyoto, as a good example of well-organized and uniform cityscape was quite telling.

Another interesting feature of this response is the feeling that restrictions are always bound to come about from somewhere. In effect, even if there are no official restrictions brought forward by the administration, somehow the environment is bound to bring them up anyway, one way or another. This view was quite common across both samples, and there was no notable difference between the number of Japanese and Finnish who expressed this idea. However, contrast the previous idea of restrictions being good with the following excerpt from a Finnish interviewee, who also had some real-life experiences regarding Finnish bureaucracy and architecture:

"[…] (Interviewer; …freedom or restrictions?)

Well, freedom of course. (laughs) Nothing is more important. It is… in my opinion, you could have a million speeches for it, and it wouldn't be too much. Like, this country is partly in a situation where- that we are where we are now because we have so many regulations that not many can act anymore, and nothing new can be developed. And above else in my opinion, that every regulation always blocks or seals away something new, and the less we have inventions of our own, and the less folks are inspired to invent anything, as their first instinct will be that it is probably illegal.

[…]

And that Finland has so many laws, that practically anything can be foiled if need be. Like, and also, that there are so many laws that for example the buildings control bureau; they don't even know them all … So that, often, as I have been working, I have been reminded of the Soviet Union, that there are just so many laws that everything seems to become arbitrary… […]"

"[…] (Haastattelija; ...vapaus vai rajoitukset?) *No vapaus tietenki. (naurua) Mikään ei oo tärkeempää. Se on ihan… mun mielestä... Siit vois pitää miljoona puheenvuoroa ja se ei ois liikaa. Et tota, tää maa on kyl osittain tilanteessa se- (takeltelua] et, niinku täs hetkessä ollaan sen takia et meil on oikeest niin paljon määräyksiä et moni ei pysty toimimaan, ja uutta ei pysty kehittään, et se, ennen kaikkea mun mielest se, et jokainen määräys, aina, sulkee pois jonkun uuden asian. Ja, sitä vähemmän meil on omii uusii keksintöjä, ja sitä vähemmän jengii innostaa tehdä yhtään mitään, ku ne aattelee, ensijainen ajatus on se et se on varmaan laiton. […] Ja, et Suomessa on niin mont lakia, et ihan mikä tahansa asia pystytään torppaamaan, jos siihen vaan jollain on haluu. Et, se, se on niinku, ja sit toinen se, et lakei on niin paljon et esimerkiks rakennusvalvonnas, ni ne ei ees tiedä niit kaikkia mitä niil on... Et, sit kyl, niinku, ihan väkisinki tulee monesti mieleen sellanen Neuvostoliitto et, tota ku on tehny, et, et, tavallaan vaan niinku lakeja on niin monta et se menee mielivaltaseks se toiminta... […]"*

Again, this interviewee too is speaking from his own experience as an architect in Finland. He had many good things to say about the Finnish system, and regarding the restrictions as well, but especially the view that there must be a certain counterweight to rules and regulation was well shared by virtually all Finnish interviewees. A polar opposite to the Japanese who were concerned about their uncontrolled and, frankly speaking, unregulated chaotic cityscapes.

The urban fabrics mimic these views. In Japan, the prevalent jumble of uncoordinated forms and colours is a loud statement regarding the level of control the central government is, or rather is not, able to exert. On the other hand, especially the old districts of Finland's big cities are so uniform in face and façade that an inconsiderate change, even a small one, can instantly become noticeable. Similar uniformity is noticeable in some older city districts of Japan, for example in the previously mentioned Kyoto, the official capital of Japan since 794 until as late as 1869, but these are quite rare and isolated instances, often surviving on tourism alone.

There was no difference in the idea of an ideal city across the interviewees. Or rather, there was such a huge variation of preferred cities, that there was virtually no correlation whatsoever between two separate responses. In fact, interviewees had more hopes and aspirations for good cities than there were interviewees altogether. Everyone had unique ideas about what is good and what is not, what kind of buildings constitute good urban landscape and what is useless or useful, what is important and what is irrelevant. Ultimately however, almost everyone shared one view, which is without any question best expressed by this interviewee;

> *"[…] …humm, chronologically, or like, old city districts are quite nice and pleasurable. Before prefab-building… and regardless whether it is a wood-town district in some small town, or the brick houses of Töölö, or… that if you can see that a building is older than your own parents, you are immediately left feeling good.*
>
> (Interviewer; Can you estimate at all why these areas are so much more pleasurable than the prefab-buildings or the buildings made during the prefab-boom; where's the charm?)
>
> *…well, I was thinking about this one day, that nat- it is fun to walk in nature, as you can see things in various different phases all around you, that there is coarse woody debris, and there is growing new, then you can feel there exists a continuous cycle, and that old, if there is enough temporal strata, creates a similar feeling. Like, then you can feel that you are a part of that city, and that city keeps on dying and living, on and on. But, if it's all built in one go, then it looks all new when it is new, and when it starts to decay, it all decays at the same rate. That is somehow, like, so much flatter, the experience… […]"*
>
> *"[…] …ja-a, ajallisesti, tai niinku, vanhat kaupungin osat on aika viihtyisiä ja miellyttäviä. Siis niinku ennen elementtirakentamista… …ja sit riippumatta siitä että onks se joku pienemmän kaupungin puutalokaupunginosa tai Töölön tiililtaloja tai… tuntuu että se et rakennuksest näkee että se on vanhempi ku sun omat vanhemmat ni siit tulee jo heti sillein hyvä fiilis.* (Haastattelija; osaatko yhtään arvioida sitä et minkä takia ne on niin paljon viihtyisämpiä ku nää elementtitalot tai elementtirakentamisen aikaan tehdyt tuotteet; mikä siinä vetoaa?) *...no, mä tätä pohdin yks päivä, et luon- ku kävelee luonnossa niin se, se on kivaa, tai niinku se, sä näät ympärilläs kaikissa eri kasvuvaiheissa olevii asioita, et siel on lahopuuta ja kasvavaa uutta, ni sit tuntuu et se on niinku semmonen jatkuva kiertokulku, ja sit vanhat, jos on tarpeeks ajallisia kerrostumia, niin sit se ehkä luo jotenki samanlaisen fiiliksen. Et sitte tuntuu et sä oot niinku osa sitä kaupunkia, ja se kaupunki elää ja kuolee jatkuvasti. Mut sitte taas jos se on rakennettu kaikki kerralla ni sit se, uutena se näyttää kaikki uudelta, ja sit ku se alkaa rapistuun, ni sit se rapistuu kaikki samaa tahtia. Se on jotenki paljon litteämpi, se on niinku, kokemus... […]"*

Not old or new, not tall or low, not grand or plain, not wood or stone, but *variation*. For every interviewee, variation was the single most important aspect in the cities, even though most never realized this undertone in their responses. Humans yearn to be part of their environment, and variation is one of the most important aspects of any environment, physical and mental. People tend to hang out with people of similar age and like mind, but it is against the full spectrum of humanity

that their individual ideologies are reflected against. There is nothing quite like someone saying, without reservation and in complete honesty, that *"I do not agree with what you just said."* That phrase, or any implication of it, is so much more powerful catalyst for action than its counterpart; *"I totally agree with what you just said."* The other challenges you to think and to defend your point of view, whereas the other simply kills the process instantly. One is a beginning, the other an end.

There was one more aspect that resounded through both samples very loudly, and it probably had the biggest influence in directing this work in the new direction. This view was shared by virtually all of the interviewees. Nevertheless, this next excerpt of perhaps the most surprising response to a question in all of the interviews summarizes it the best:

> *"[…]* (Interviewer; …then, what do you think "Urban Planning" is?)
> *Urban planning… hmmm…* (long pause) *Impossible.*
> (Interviewer; Impossible?)
> *It's thoughtless. Reckless.*
> (Interviewer; Huh!?! What? What do you mean?)
> *Well, for example, architecture, it's, well, others do intervene to a certain extent… but still, to a large extent it's designed by an individual according to all kinds of opinions. Ah, well, it's never just an individual, right, but to a large extent it's something that's created by an individual. Things like that I consider architecture.*
> *However, urban planning is made by all kinds of people… Like, there are so many opinions and memories scattered all over. That's the context of urban planning. I mean, you cannot make it orderly, without a doubt. It's impossible. There are the opinions of all kinds of people, that's what a town is, what a town truly is. You can have a city, that's possible, but you cannot have urban planning, I think that's impossible for sure…*
> *A city is an amalgam of so many desires and wishes, all standing in disarray. Like, there are people who want to block the sunshine, and then there are people who want to let the sun shine more, I mean a city is the embodiment of so many opinions, or more like, that's how it always becomes… In my opinion, that's what a city is.*
> *And then, to plan that? It must be impossible… To get everyone to feel the same, to get everyone to look in the same direction, to plan in such a way… It just has to be impossible, I think… […]"*

> *"[…]* （会見者；…さ、都市計かっくってのは、何だと思いますか？）都市計画… ふむ… 無理。（会見者；無理？）無謀。（会見者；…え？そんな事？そんな事って、どこまでって？）あの、例えば、建築だったら、あの、まぁ、ある程度の人の介入はあるけど、ある、一人、あ例は、一人が意見を汲み取ってデサインせおもの。あぁ、して、まぁ、えぇ、絶対一人じゃないんだけど、ある程度一人で計画、仕切れちゃう様なものは建築だと思う。けれど、都市計画は色んな人が、こう、色んな思い出、点在して作っていく だからこそ、絶対に、あの、秩序が、秩序だった都市計画は絶対に出来ない。色んな人の意見が入ってて、それが、街を、まち、それが街なんでから、都市は出来るだけど、都市計画は出来ないと思っている。… 色んな欲望が、乱立するのが都市だから。日射を遮りたいってと思ってる人もいれば、日射を取りたいって思ってる人もいるし、色んな思いが、具現化しと言うか、形になって来た… って言うのは都市だと思うし。だけどそれを計画するってのは無理があると。全て、同じ思い出、皆が皆同じ、あの方向を向いて計画しくて、なかなか無理があるじゃないかな〜って… *[…]"*

Again, the view on urban planning is less than convincing, but the important point is the human dimension of cities, which no interviewee managed to forgo. The idea from the very first excerpt, that architecture is human-oriented, that a human is a non-negotiable prerequisite for architecture or urban planning, was deeply ingrained in the responses of every single interviewee. Even to those who saw architecture mainly as a structure, the human being was still an essential element as the main objective, at least as the one whose needs are to be served. Several Japanese even used a rather nice expression for urban planning as *"a collage of architecture"* (*kenchiku no shūgōtai;* 建築の集合体).

"[…] (Interviewer; Is urban planning necessary?)

…well yeah.

(Interviewer; Why?)

Well, you know [name of a developing country], right? They don't exactly do a lot of urban planning there. Well… That can result in a chaos, the kind of chaos that is self-regulating, and thus prevents the real kind of chaos. It's like, well, that there's order in the chaos, but… Well, good things can come out of that as well, because things are born kind of naturally, and people are constantly having a concrete effect on what is going on, but… Maybe, just maybe, the holistic whole from before is not the most functional…

(Interviewer; Meaning?)

Meaning that urban planning is quite a good thing. […]"

"[…] (Haastattelija; onko yhdyskuntasuunnittelu tarpeellista?) *…joo. (miksi?) No, [Kehitysmaa], missä ei ehkä ihan hirveesti harrasteta yhdyskuntasuunnittelua. Öö... Siit voi seurata kaaos, usein semmonen kaaos joka ohjaa itse itseään, ja siten estää semmosen todellisen kaaoksen, se on niinkun... Kaaoksessa on järjestys... mutta... Niin, no siit voi syntyä myös hyviä asioita, koska asiat syntyy vähän luonnostaan, ja ihmiset ihan konkreettisesti vaikuttaa koko ajan siihen mitä syntyy, mutta... ehkä se aikaisemmin mainittu kokonaisuus ei välttämättä ole toimivin mahdollinen...* (Haastattelija; Joten?) *Joten yhdyskuntasuunnittelu on ihan hyvä juttu. […]"*

Thus, the interviews revealed that at least in the current architectural education, and to the coming generation of architects, human interaction is the key element. Further still, for advocates of freedom, responsibility chained that freedom with an inherent set of rules, and in a very similar tone, advocates of restrictions often mused that without rules the system would, must even, fall into chaos. Therefore, a system of rules and restrictions must arise from somewhere to prevent this, which lead to the following summary;

A city is, in essence, the people who live in it, and how they live in it.

These are of course just the views of just some 32 young students of architecture from Finland and Japan. While there is a possibility that they are all plain mistaken, the above summary does not seem like an unfair statement. But, it raises another question, and it is that question which turned into the driving force behind this work; *Where do the restrictions [of urban planning] really spring from?*

Students of architecture were chosen as the target group for 3 reasons: One, their opinions are not yet chained by the professional realities due to inexperience, and thus they represent what the average citizens would think much better than professional architects. Two, they however do have corresponding training in the field, which should make them interested and well-versed in the subject by default. And three, as they are young, they are the most critical and open-minded about the future. After all, they are it. Now, if the next generation has been brought up in an environment, and educated in a manner that does not reflect the future they are going to step into, it is obvious that some serious friction is waiting just behind the corner.

Thus, urban planning definitely seems like an incredibly difficult and multi-layered discipline, that seems arcane even, leaving those outside of it desperately unfamiliar with it. As most citizens will only ever encounter urban planning a couple of times in their lives at most, it is curious, frightening even, to see that even people who have studied the subject, even people who have worked in the field, to be unfamiliar with the core concepts. Simultaneously, this feels like *Arcana Imperii,* a state secret only given to the most influential and esteemed people, and a system that is self-organizing, organically led, and ultimately uncontrolled. With the discovery of these ideas, the work on this thesis took a turn away from urban planning itself, and towards urban culture.

Intelligence, Extelligence and Cultural Evolution

"Kenenkään minua opettamatta olen oppinut jotakin, mitä en voi opettaa kenellekään."

"Without anyone to teach me, I have learned things, that I can never teach to anyone."

Pentti Saarikoski, *Aika Prahassa,* 1985

With the change in general theme, from urban planning as an institution into the context of urbanization, it became important to frame the subject of this study in a completely new manner. As it happens, there is a very useful word we can use to describe this phenomenon, and through which the discourse of this thesis can be built. That word is *"Culture,"* and in this chapter I will contemplate on its meaning, characteristics, and life.

Now, most readers probably think of *"culture"* in terms somewhat different from my intention. In fact, as we have just witnessed, even simple terms may not be as self-evident as one would like to think. Thus, I invite the reader to first pause for a moment, and really think for a moment (preferably without the help of a smartphone, internet or a dictionary) about *"what does 'culture' really mean?"* If you find this task difficult, and the definition ambiguous, then I suspect you too would agree that some definitions regarding the central terminology are in order. As *"culture"* happens to be a complicated term, and a central aspect of this discourse, let us begin with its smallest component; a *"Meme."*

As a word, **Meme** was originally coined by Richard Dawkins in his revolutionary book, *"The Selfish Gene,"* in 1976, and after gaining a steady foothold in the scientific community, the term has been steadily evolving ever since. It comes from Greek *"mimeisthai"* (*μιμεῖσθαι*) meaning *"to imitate,"* and it was shortened to a *meme* so that it would echo the word *gene* (Dawkins, 2006). Today the word is very common and actively used in English language, although in a somewhat misleading fashion: Here, *"meme"* does not refer to *"internet memes,"* even though they are a fantastic example of the concept.

Dawkins argued that *genes* were the smallest denominator of evolution, the "original replicators." He then presented his revolutionary idea that what if our thoughts and minds were inhabited by a new type of replicators? A *meme* is an idea, that tries to replicate itself by infiltrating into other minds. Like *genes, memes* are not necessarily simple in structure or duty. There is no single *gene* for tallness for instance. Tallness is influenced by many different genes that together produce several aspects that influence the size of an individual. Likewise, *memes* influence one another, and just like *genes*, *memes* too engage in a struggle to multiply and to be successful as replicators. Weak ones wither away, while strong ones are the ones that most efficiently lodge into the minds of others. (Dawkins, 2006)

Thus, a *meme* is effectively an idea. It can be a simple one, say for example *"1,"* but it can also be a more difficult one, *"a dog"* for instance. Dogs have numerous aspects that make them dogs; they bark, they have four legs, they wag their tails, they slobber, they are considered man's best friend, they love to run after sticks, they hate cats, and so on. All of that is very efficiently packaged in one's mind under the label *"dog."* But wait, we have heard of dogs that like cats, have we not? They are certainly rare, but they do exist, and they would still be called *dogs*. And what are these *cats* and *tails* and whatnot we are speaking about? (Cohen, Stewart, 1994)

Further still, *meme* is not a linguistic term. The above labelling is only a shallow part of what *memes* can do. For example, the above idea that architecture needs humans to become architecture is clearly a *meme*, quite a powerful one in fact, and yet you would be hard pressed to find a label to that idea. The question is, is that idea part of the *meme* called *"Architecture,"* or is *architecture* just a strange amalgam of interlocked *memes* that escape easy definitions? Quite frankly, just like with *genes*, we do not know. Personally, I think that the amalgam seems like a more likely explanation.

Memes & the structure of an intelligence (Drawn by the Author)

What we do know however, or at least can hypothesise, is that *memes* are engaged in the same kind of struggle for survival as *genes* are. Catchy and useful *memes* lodge themselves deep into our thoughts, whereas clumsy, complicated and useless *memes* are forced out. When we hear of an idea better than we previously had, the corresponding *memes* can evolve, or they may even be replaced with completely new ones. Such development can, and naturally does occur within an intelligent mind as it encounters new and challenging situations to which it must find solutions. This is what intelligence evolved for, after all. However, this is an excruciatingly slow process, and does not really provide a breeding ground large enough for *memes* to allow for proper evolution.

That problem is fixed with **Extelligence**. The term was coined by Ian Stewart and Jack Cohen in 1997 in a book called *"Figments of Reality,"* and has been one of their major contributions. They first point out that Earth hosts many very intelligent species in addition to humans, like octopodes, bears, especially dolphins, apes, rats, ravens, etc., and that humans are not in any way special in this sense. The twist is that humans are the only ones that have managed to pool their individual intelligences together into a collective whole, something that individuals can tap into, and contribute to. This creates a feedback loop, in which the individuals influence the evolution of the collective whole, and the collective whole then influences the individuals who tap into it. Cohen and Stewart named this collective whole *extelligence*, and in effect, it is the cultural capital available to our minds through various media in the community; books, rhymes, movies, poetry, jokes, etc. (Cohen, Stewart, 1999)

Another way to think about *extelligence* is that it is all the knowledge that you can access, even though it is *outside* your head, exactly like the name implies. Of course, as opposed to the confined limits of a singular intelligent mind, *extelligence* is a prime breeding medium for *memes.* Via *extelligence* ideas get transferred from one mind to the next, and then back again. Just talking with your neighbour is enough to accomplish this. As you talk with her, she is exposed to the *memes* inside your mind, just like you are exposed to the *memes* inside hers. Both of you are likely to walk away from the encounter ready to spread the new ideas you got from the conversation to your other friends. As this is happening all the time all around, the *extelligence* is under perpetual pressure to evolve.

Extelligence; Interaction of intelligences, and effectively a Feedback-loop (Drawn by the Author)

As an example, take the roundaboutness of many of the excerpts in the previous chapter. This shows how the interviewees did not have any ready answers, but instead built the idea over a span of few minutes. Whenever many interviewees were giving very similar answers in differing ways, with different words and different examples, it gave great reassurance that strong *extelligent* influence was present. On the other hand, when many interviewees used exactly the same words, it represented learned views over strong *extelligent* influence.

With these two terms, *meme* and *extelligence*, we are ready to tackle **Culture** itself. *"Culture"* itself is an old word, and it is indeed a very multi-layered word that has many different meanings. For example, Dictionary.com, an online dictionary, has no less than 12 different entries for the word. However, none of these explicitly describes the process *culture* as it is understood in this thesis, although many can be understood in this way. I give the word to the gentlemen themselves;

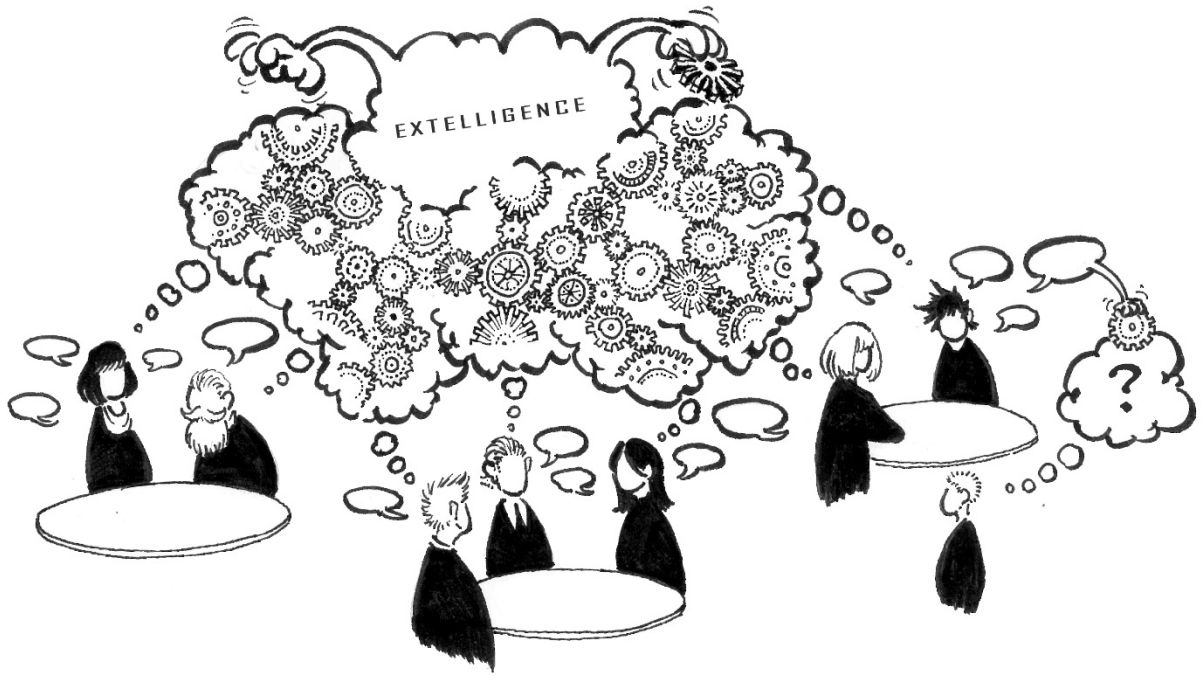
> *"[…] Intelligence is the ability of the brain to process information. But intelligence is only a part of what is needed to make a mind. And even intelligence is unlikely to evolve in isolation.*
>
> *Culture is basically a collection of interacting minds. Without individual minds you can't have culture. The converse is perhaps less obvious, but equally true: without shared culture, the human mind cannot evolve. The reason is that there is nothing in the environment of the evolving mind that can drive it towards self-complication – becoming more sophisticated – unless that brain has something else fairly sophisticated to interact with. And the main sophisticated thing around to interact with is minds of other people. So the evolution of intelligence and that of extelligence are inextricably linked, and complicity between them is inevitable.; […]"*

Ian Stewart & Jack Cohen, *The Science of Discworld,* p. 348

Culture is *not* the same as *extelligence*. It is close, and yet still very different. *Culture* is, as is written above, a collection of interacting minds, whereas *extelligence* is simply the cultural capital that the people tap into. *Culture* is the complicity that the last line of the quote mentions, the very interaction between *extelligence* and *intelligence* itself. *Cultures* contain countless customs, morals, thought processes, languages, words, ideas, aesthetics, knowledge, literature, and ever so on. In other words, countless *memes*. Simply look at the etymology of the English word "*Culture*" itself, and how it evolves from cultivating crops, from influencing the *genealogy* of the plants, to cultivating intelligence, and thus influencing the *'memealogy'* of minds. (Cohen & Stewart, 2002)

> *"Noun.*
> *Mid-15c., "the tilling of land," from Middle French* culture *and directly from Latin* cultura *"a cultivating, agriculture," figuratively "care, culture, an honoring," from past participle stem of* colere *"tend, guard, cultivate till" (see cult). The figurative sense of "cultivation through education" is first attested c.1500. Meaning "the intellectual side of civilization" is from 1805; that of "collective customs and achievements of a people" is from 1867; […]"*
>
> *Online Etymology Dictionary*, <www.etymonline.com>

To be clear, while it could be said that *culture* is the collection of the strongest dominant *memes* that act in it, this would in fact be wrong. The collection of strongest dominant *memes* is only what is visible to the outside; how a *culture* is typically portrayed. Think about Finnish and Japanese culture. Some aspects certainly jump out instantly, like *sauna,* or *politeness,* or perhaps *introversion*, and so on. However, culture encompasses everything that takes place within it. There are countless situations in which an input does not incur 'typical' response, leaving the uninitiated baffled. Furthermore, *memes* act in accordance with other *memes*. This means that there are still individuals, and that the dominant *memes* of a *culture* have different effects depending on the individual. This is the definition of *culture* in the context of this thesis.



A *Culture;* Extelligence *and* intelligences (Drawn by the Author)

Naturally, as the number of people increases, so too must *culture* become more and more vibrant and vigorous. And where are there more people than in urban areas? Thus, a **City**, or a town, finally enters the stage as the true main character of our story. Nothing could take place without it. However, just like with *culture*, it is justified to ask the question, how should we define a *"city?"* I first give the word to Spiro Kostof, the author of *"City Shaped; Urban Patterns and Meanings Throughout History,"* an extensive resource of urban forms and meanings;

> *"[…] To conclude these introductory remarks, I think we can agree on some simple premises about cities, regardless of their origin, their birthplace, their form their makers. Two sensible definitions, both from 1938, would allow us a good starting point. For L. Wirth, a city is "a relatively large, dense, and permanent settlement of socially heterogenous individuals." [22] For Mumford, a city is a "point of maximum concentration for the power and culture of a community."[23] […]"*
>
> [22] American Journal of Sociology *44, 1938, 8.*
> [23] *L. Mumford,* The Culture of Cities *(New York/London 1938), 3.*
>
> Spiro Kostof, 1991, p. 37

Kostof then elaborates these definitions into 9 aspects that make up what we consider to be cities. These are: 1, *Energized crowding*, referring to a certain level of settlement density, and leadership within that intensified crowding; 2, *Urban clusters*, referring to an urban hierarchy, an urban system of cities and towns in relation to each other; 3, *Physical circumscription*, referring to the line of separation, physical or legal, between what is and is not within the city; 4, *Differentiation of uses*, referring to the disparity of areas and people in the city, some richer or more important than others; 5, *Urban resources*, meaning that cities are never without a meaning, be it trade, material or social capital, intensive agriculture, geographical advantage or some other resource; 6, *Written records*, referring to the importance of written records in cities, such as tallies, laws, documents, and most importantly, reference of ownership; 7, *City and countryside*, referring the relationship between the two, and how they influence each other, as one cannot exist without the other; 8, *Monumental framework*, referring to the fact that cities are commanded by all manner of monuments, cultural, economic and technological alike, that give the city its scale, its grandeur; and finally, 9, *Buildings and people*, referring to the fact that a city is not a city without its people. (Kostof, 1991)

Thus, cities stand at the forefront of cultural evolution. Everything that happens in society tends to happen first in cities. Referring to the quote above, they are the *"point of maximum concentration for the power and culture of community,"* a concentration of people, and everything that comes with them. Cities are the representatives of cultures, of communities, and of nations, and it is precisely this idea that all the interviewees were stumbling at. For this reason, I must quote Kostof once more;

> *"[…] Finally, cities are made up of buildings and people. I agree with Kevin Lynch: "City forms, their actual function and the ideas and values that people attach to them make up a single phenomenon." [26] […] Conversely, we can discount scholarly claims for the fully established and long lived Mayan sites or for places like Angkor Thom and Nakhon Pathom that they were not real cities because they had no residential population. These spectacular ceremonial settings and the priests and the builders and the artisans and the people selling them things belonged together. […] For all that, the city is one of the most remarkable, one of the most enduring of human artifacts and human institutions. Its fascination is inevitable: its study is both duty and homage. […]"*
>
> [26] K. Lynch*, A Theory of Good City Form* (Cambridge, Mass./London, 1981), *36.*
>
> Spiro Kostof, 1991, p. 40

At this point it should also be noted that *cultures* are rarely isolated. It is absurd to think that Finns would think themselves Finnish, and only Finnish, and Japanese themselves as Japanese and nothing else. Within countries there are provinces, prefectures and regions, and within these there are municipalities, towns, boroughs and cities, and again within these there are districts, streets, communities, and then sub-groups within these, and so on. It goes on forever. If you thought that ultimately you are left with a group of yourself alone, remember that there is no reason overlap cannot occur. There are different classes, for example. Or perhaps you are part of several circles of friends, and your friends in one circle are not friends with your friends in another circle. The combinatorics can easily provide us with more groups of several people than there are individuals.

These *sub-cultures* are in constant interaction with the neighbouring systems as well as with themselves. *"A City is Not a Tree"* wrote Kristoff Alexander, referring to the fact that human life itself does not organize itself neatly according to planner's wishes, or her whims (Alexander, 1965). Alexander's *'tree'* is a mathematical model, where nothing overlaps *across* subdivision of parts. This however does not represent a city any more than it does human social interaction. Humans have always, and will always group and act across the subdivisions, and it is precisely that interaction that facilitates the cultural evolution on all levels.

There is but one final concept that remains to be mentioned: **Urban planning** itself is a diverse term, that has come to mean almost any form of planning that affects cities and urban areas, be it logistical, infrastructural, function-oriented, aesthetical, or almost anything else. The beginning of urban planning is often credited to the quick growth of cities into unsanitary, confined spaces in a chaotic network of roads (Ushio, 2005). Such chaos quickly needed order, and via some form of planning at least some semblance of that order was always achieved. This holds true for ancient civilizations, as well as for the industrial revolution, and everything in between.

Quite naturally, the term quickly came to include aesthetic design as well, thanks to the bourgeoise. Especially in economics, looks can be much more important than reality itself (Graeber, 2014). Thus, as cities have always been inhabited by the mercantile classes, aesthetical development is a very natural course of development. After all, just as a prosperous *looking* individual is considered to *be* prosperous, logically the same holds true for cities as well (Ushio, 2005). This was especially so in the West, where the power shifted from the nobility to the bourgeoise during the early renaissance and onwards.

Unsurprisingly, and somewhat regrettably, the Finnish and Japanese words for urban planning do not really match the above definition. Not only that, there are actually several different words in both languages that can refer to different aspects of urban planning. These are presented in more depth in the next chapter. Before that however, I must muse on *culture* some more.

Narrativium?

Now that the terminology is in order, it is time to talk about why. Why is the historical perspective so important that the discourse is built upon it? Why has so much time and effort been used in understanding the past, when all we are trying to do is describe the systems in the present? This argument begins with a statement;

History has an incredible connection to the present.

Such a statement seems so obvious, that it might even feel a little foolish. But the roots go even deeper than the mighty tree extends above. Robert Putnam has showcased this in his book, *"Making Democracy Work; Civic Traditions in Modern Italy"* (Putnam, 1993). He showcases rigorously and convincingly how the political climate of the past has a direct, and frighteningly strong connection to the political climate of today. And that past is not just years, or decades, or even centuries ago, but a full millennium! Where traditions of horizontal relationships have governed, even temporary lulls of vertical subject-master relationship networks have inevitably reverted back to the horizontal model (Putnam, 1993).

Nearly the same observation is made by the famed planning scholar Bent Flyvbjerg. In his book *"Rationality and Power; Democracy in Practice"* he reveals that even while we have achieved democratic ideals on the surface, under the surface 500-year old traditions of city governance are still being employed without almost any change (Flyvbjerg, 1998). Furthermore, his case study of more than 20 years is the city of Ahlborg in Denmark! A Nordic country, which are almost universally considered to be among the most equal and democratic nations in the world on a number of parameters. Flyvbjerg's realization is the fact that power and rationality are interlocked in a curious one-or-the-other relationship; power can *define* reality, and thus can do without it, whereas rationality is a means employed most often by those who do *not* have any power whatsoever (Flyvbjerg, 1998).

While both books are considered classics in planning theory and political science, the strong link between past and present can be seen elsewhere as well. In his book *"Wonderful Life; Burgess Shale and the Nature of History"* Stephen Jay Gould, a famed biologist, palaeontologist and a historian of science, showcases just how strong the influence of the past is in natural sciences as well, even when the evidence to contrary is as clear as ever (Gould, 1989). Long story short, the massive treasure trove of fossils found at the Burgess shale in 1909 and onwards, which would later revolutionize the Theory of Evolution, were completely and utterly misinterpreted for more than half a century. Why? The world was simply not yet 'ready' for the massive overhaul in evolutionary biology that the Burgess shale was about to provide, and thus the prevalent ideas (*memes*) remained in power. Change takes time.

Let us then call this strange reluctance to assume new order as *inertia* of change. It takes massive, herculean effort to introduce a new order of things. World history is full of such examples, where new opportunities and options of new social order were laid in front of the masses, and yet they still hastily chose the old, familiar ways. Just to give one example, when slavery was abolished in the Roman empire, the slaves quickly negotiated their way back into service of their former masters, reverting to the old order of things, and thus in fact creating a primitive model of wage labour, an institution still in use today (Graeber, 2014) New is always scary, and sure enough, like Flyvbjerg and Putnam, I too shall quote Machiavelli here, for he too has a befitting word regarding this point;

> *"[…] And it ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in introduction of a new order of things, because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new; […]"*
>
> Machiavelli, *The Prince*

And why should past not affect the present? After all, they are interlinked in the most absolute manner imaginable; via direct chronological link, one moment constantly leading to the next. Explaining that link and its strength is not the aim of this thesis, but nevertheless 1000 years will most likely seem implausible to some, and as such, this point deserves a little elaboration;

> *"[…] We get up in the morning and leave the house at 7:15* because *we have to get to work by 9 o'clock. Scientifically, this is a very bizarre form of causality: the future is affecting the past. That doesn't normally occur in physics […]. In this case, science has an explanation. What causes you to get up at 7:15 is* not *actually your future arrival at work. If in fact you fall under a bus and never make it to work, you still got up at 7:15. Instead of backwards causality, you have a mental model, in your brain, which is your best attempt to predict the day ahead. In that model, realised as buzzing electrons, you* think *that you ought to be at work by nine. That model, and its expectation of the future, exists* now, or *more accurately, a short time in the past. It is that expectation that causes you to get up instead of lying in and having a well-deserved snooze. And the causality is entirely normal: from past to future by way of actions taking place in the present.; […]"*
>
> Ian Stewart & Jack Cohen, *The Science of Discworld II,* p. 25

That mental model is part of what Cohen and Stewart humorously call *narrativium,* or the *narrative imperative*. It is a mysterious 'substance' that dictates most of our actions, as we try to construct a credible and feasible narrative (a prediction, that is) of the near, and sometimes far, future (Cohen & Stewart, 2002). That constantly evolving 'story' is based purely on an individual's prior experiences and knowledge, as those are the only things we can rely on; they are *everything* we know. And we acquire those experiences and knowledge from the people and culture around us. In great deal from the *extelligence* that is.

Now, if *extelligence* largely dictates *how* we learn to construct our narrative of the future, the narrative that will largely dictate our future actions, is it any wonder that we grow up mostly adhering to the mainstream? After all, our parents were most likely also brought up in the same environment, attached to the same extelligence, as part of the same culture, albeit at different time. Furthermore, constantly going against the mainstream culture is bound to cause constant cognitive strain, making the act of breaking away from the prevalent cultural norms even less appealing, and less sustainable. A child is thus highly likely to grow up very much like her parents, who were in turn brought up similarly to their parents. The system is clearly self-reinforcing, constantly at search for ever stronger and more resilient cultural memes.

This argument is quickly nearing an absurd state of *"nothing ever changes, because it cannot."* Obviously, this must be wrong, as things most certainly *do* change, as they constantly have throughout world history. So, what causes these changes? "The Great Man theory" is a view of history that sees history being made by few 'great' men, such as Julius Caesar, Napoleon Bonaparte, Adolf Hitler, Tokugawa Ieyasu, Carl Gustaf Mannerheim, and so on. Even though it seems reasonable that such

great men could indeed institute great changes via a multitude of ways, I do not want to argue for or against the Great Man theory.

Instead I present another, much stronger driving force; *necessity and duress*. Nations and cultures change when they have to, when they *must* change. For it seems that man is quite fine with even grossly unfair social order, *so long* as he can make ends meet. However, the moment the situation becomes unsustainable, the masses start to move, and suddenly change is upon everyone like a bolt of lightning from a clear sky. It is in such times of great unbalance and strife when new options are finally being seized upon. And even then, the change tends to be as small and minimal as it can possibly be, just enough to balance the situation once again. The inertia of change does not vanish so simply. This leads to a curious consequence; such unbalance rarely arises from within. As with evolution, interaction, a genuine feedback-loop between systems is the best catalyst for development; Between content and context lies contest (Cohen & Stewart, 1994).

People are born roughly the same anywhere in the world. It is culture itself that creates the vast disparities between nations and people. *We are not what we are born to be, but what we are raised to be.* And the way culture evolves is largely dependent on the diversity of its own environment. Context is just as important as content, and an oversight in either easily warps the image of the whole. Thus, history is an essential resource in understanding different systems. Without that understanding, alien systems may seem confusing, contradictory, and maybe even impossible. This is doubly true in foreign cultures.

Language, Culture and Architecture in Historical Context

> *"Now* there*, said he, pointing his finger, I make a comma, and there, pointing to another spot where a more decided turn is proper, I make a colon; at another part (where an interruption is desirable to break the view) a parenthesis – now a full stop, and then I begin another subject."*
>
> Lancelot 'Capability' Brown, 1782, *(*from *Praz, 1974), p. 42-44*

Now that the idea of cultural evolution has been introduced, it is time to take a short introductory look into the special characteristics of Finnish and Japanese cultures. In this chapter I will deliberate on the relation of culture and language, as well as muse on how Japanese and Finnish languages affect their corresponding cultures and nations.

Cultures are experienced very individually. Different cultures present different faces to different people. Depending on one's personality, some fit naturally better than others, while others may end up being an acquired taste. However, regrettably often culture is effectively reduced to simple list of different customs and practises, and then that list is called "culture." This could not be further from the truth. As was written in the above chapter, *culture* is the *entire* complex system of individuals of a certain group interacting with the local *extelligence,* and with each other. Any customs or practises are simply very strong and vigorous memes that are prevalent in the culture.

Even though memes are not tied down to linguistics, human thought certainly takes place in one language or another. Babies exhibit this already; the indescribable gabble of babies already has the seed of language in it, meaning that Japanese babies gabble Japanese gabble, while Finnish babies gabble Finnish gabble (Cohen & Stewart, 1994). As the objective of this thesis is the study of cultural evolution in Finland and Japan, the best way to understand the two cultures is via the languages.

Curiously, Finnish and Japanese share some aspects as languages, like inflection of words themselves to include additional meanings in a single word. On the other hand, in some aspects they could not be more different. For example, while the basic pronunciation is, at least to unlearned listener, very close to each other, the rhythm of pronunciation is completely different. Finnish has a very distinct and strong pronunciation while Japanese is very soft. The letters "L" and "R" show this the clearest. However, the greatest difference comes not in the form of voice, but in the form of recordkeeping:

> *"Alphabets are efficient ways to record speech. The idea of an alphabet is the germ of dozens of ways of writing a language, all learnable as systems in much less time than it takes to learn the languages they write. Syllabaries are hardly less efficient if the number of distinct syllables is not large. In Old Chinese it is. Over 3800 syllables are distinguished in 廣韻,* [*Guangyun;* Simplified Chinese] *and Archaic Chinese had more. That would be a burden if each syllable had one symbol, but in Chinese writing we find the inventory multiplied ten-fold. It is the worst script in the world, save only one, and that one is derived from it. (I mean of course the one Sir George Sansom called "surely without inferiors", [b] the monumental junk-sculpture of a script that the Japanese have made by remorseless bricolage of Chinese books.)"*
>
> [b] *Historical Grammar of Japanese, Oxford UP 1928, p. 44*
>
> John Cikoski, 2011, p. X

In his book, *"Learning from the Japanese City,"* Barrie Shelton argues this aspect to be of major difference between Japanese and western thinking (Shelton, 2012). The argument begins with the fact that Japanese use 4 sets of characters in their written language, whereas in the west we only use one, the western alphabet. The Japanese sets are two sets of *kana* (仮名) characters, *hiragana* (平仮名) and *katakana* (片仮名), western alphabet, which is called *romaji,* and the Chinese characters called *kanji* (漢字). The western alphabet, the so-called *romaji* (ローマ字), need no further introduction. The *kana*-characters are the Japanese alphabet; all Japanese words can be written with them. The two sets are also identical, both with 46 characters that correspond to each other. The most important set however, is the *kanji*.

Kanji are characters that have a specific meaning instead of a defined way of pronunciation, and thus there are thousands of them. In fact, most *kanji* have multiple ways to read them, many have several overlapping meanings, and most also change meaning when they are joined by other *kanji*. Even further, several completely different sets of *kanji* are read exactly the same way, meaning that often the only way to decipher the correct meaning of a word is through context, or by seeing it written down. It is quite possibly this overlapping, which can be paradoxical even, that gives the Japanese culture its incredibly multi-layered nature (Shelton, 2012). Japanese often say things that they do not really mean, and quite often they also leave something, sometimes the most important part, unsaid.

Furthermore, Kanji are roughly square-shaped, whereas western alphabet are written in lines. When a child learns to write in western world, he is usually given a line, or a set of parallel lines into which he must write the letters, neatly one after another. Japanese child however is presented with a square, into which he must draw the character. Consequently, Japanese can easily be written in a vertical pattern just as well as from left to right or right to left. On the other hand, western writing is always done in a predetermined line, and only from left to right.

This is due to how words are formed in the two languages. Western words are composed of characters that alone do not have any meaning. They are merely abstract ideas (sounds in fact) that gain their meaning only when they are combined in a certain way. This system thus offers limitless combinatorics, and that is where the big difference lies. The *kanji* characters *are* already words in themselves. For example, a classic method of creating proverbs in Chinese and Japanese is a 4-character compound, or *yojijukugo* (四字熟語). Here is an example:

果悪因悪

I now confess that I have played a trick on the uneducated reader. The above is not meant to be read from left to right, but from right to left. It reads *akuin'akka*, and it means *"Sow evil, reap evil."* Now, try doing the same thing in western alphabet; *"live pear ,live woS."* I suspect this to feel inherently wrong to most readers, especially because *"evil"* spelled backwards is *"live,"* which is another completely valid word in English language. Thus, the combinatorics involved in western words have proven to be a double-edged sword. While they allow for an infinite amount of words, they must be controlled in a very disciplined way; they must form a holistic unit, or else lose their meaning altogether. The *kanji* on the other hand are individual; each stands complete alone.

Enter Finnish. Finnish is an oddball language. It does not resemble the Germanic Swedish, nor the Slavic Russian in the least. It has a large number of loanwords from these, and other neighbouring languages, but the grammar is completely different. The way Finnish words can be inflected is one of the most complicated in the world. For example, a simple word, say "*kauppa*," meaning "a shop," can have not just tens, or even hundreds, but *thousands* of inflections! In fact, Fred Karlsson, the author

of *"Finnish: An Essential Grammar"* textbook, automatically generated a staggering amount of 2253 inflections for the word in 1996. Here are but few examples:

Kauppa – A shop

Kauppasi – Your shop

Kauppanne – Your shop (polite)

Kaupasta – From a shop

Kaupoistakaanko – Not even from shops? (with a hint of surprise)

Kaupoiltakohan – Possibly from the shops?

Kaupoittammekinkohan – Even without our shops, hmm?

…and ever so on. One very likely explanation for this quirk is that Finnish did not evolve as a written language. Instead, it evolved to be *sung*, from generation to generation (Hurme, 2017). As songs have inherent rules, such as rhythm, line lengths, rhymes, tones, etc., a sung language must logically evolve to adapt to these rules. And here the Finnish language developed a very neat trick indeed. By forcing words that did not really fit in the syllable count of a line by adding or taking away a little towards the end of words, the tradition of complex inflection was begun (Hurme, 2017). This quirk gave Finnish language two distinct advantages over the other available languages;

First, information is much easier to remember if it has a memorable rhythm or rhyme in it (Kahneman, 2012). Thus, as a language that is meant to be sung, Finnish is the perfect language for transmitting information among people who did not know how to read or write. It allows for quick and easy memorization of even complex messages. Second, it is plain fun. In fact, it is very likely that Finnish survived amid other very different languages simply because it provided such an ample playground for poets and songwriters; it was much more entertaining than the other options that were available (Hurme, 2017). A skilled singer can quite easily make up good and catchy songs on the spot. Finnish even has a specific word, *runonlaulanta* (roughly "poemsinging"), for singing these kinds of rhymes, either memorized or improvised. A powerful example of this is my own grandmother, who memorized her complex medication program of the week by writing a poem-song about her medicine. She hums it to herself every morning, while taking her medication at the same time.

Finnish is also rather direct language by nature. This is to be expected, as information cannot be stored on anything solid. Nuances and implied messages are naturally very affluent in the Finnish language, as can be seen from the above example, but the core message needs to be as clear and concise as possible. Otherwise it will be lost in the small changes that every singer will unavoidably make, either intentionally or by accident, when memorizing the song. Of course, written Finnish exists today, but large-scale literacy is quite a new development in Finland, achieved only a couple of centuries ago. While Mikael Agricola (1510-1557) did indeed "create" the written Finnish grammar as early as mid-16th century, the vast majority of Finnish people learned to read and write only during the 19th and 20th centuries.

It is common knowledge that Japan has a very unique and deep culture. However, while Finns often tend to deny the very existence of Finnish culture, it most certainly exists, and it is equally deep and complex as its Japanese counterpart. As culture is experienced individually, and I am just a single person whose interpretation is far from objective, thus I have decided to forgo my own doubtlessly subjective descriptions. Instead I give the floor to two very different people, who in my opinion sum up the Finnish and Japanese mentalities very well.

The first is by Tameichi Hara, a famed destroyer captain of the Japanese Imperial Navy in the Second World War. His memory of his early childhood, spent with his grandfather, who had been born a *samurai* (侍), the warrior elite of Japan's feudal age. He had seen the fall of the *samurai*-class, and yet he still upheld the ancient traditions, and wasted no time in trying to convey these teachings to his young grandson. Hara was born in 1900, and his childhood memory beautifully sums up numerous quintessentially Japanese qualities:

> *"[…] My grandfather, Moichiro Hara, was nearly 70 when I was born. He nursed me and played with me. He had been a real samurai in his youth, and he exerted a great influence on me.*
>
> *[…] My grandfather was wonderfully good to me. Because my mother was so busy, he tended and cared for me throughout my infancy. As I began to walk, it was he who took me along to nearby shrines. He would watch me, play with me, and buy candies for me.*
>
> *As I began to talk, he told me endless samurai stories. My mother told me later of grandfather's hope that I would restore glory to the family, for he thought I was the brightest child of the five.*
>
> *I can close my eyes now, and see the white-haired old man sitting erect in the samurai manner morning and evening before the family altar. The altar contained the tablets of his ancestors, as well as that of his own lord, Yorichika Matsudaira of Takamatsu. The daily routine of worship and reciting Analects of Confucius was never varied or disturbed until he became seriously ill.*
>
> *As he lay on his deathbed surrounded by the family, he called my name and asked that I came close. As I was just six, my parents brought me to his side and put my hands in one of his. The other hand clutched his treasured samurai sword, which he finally placed in my tiny hands. He coughed and struggled to say, "Tamei, this is yours. Now listen very carefully to your grandpa's last words."*
>
> *All of us were silent as the dying old man went on falteringly.*
>
> *"Tameichi Hara! You are the son of samurai and you will remember that. 'A samurai lives in such a way that he is always prepared to die.' Don't misinterpret that teaching. Never seek an easy death, for that would be against the true spirit of Bushido.*
>
> *"I have told you many times about fine samurai who suffered great hardships to achieve their missions. Try to do likewise. Always be on guard, and redouble your efforts to better yourself."*
>
> *Though I was too young to understand all he said, the dying man's expression of great affection for me was clear and unforgettable. […]"*
>
> Tameichi Hara, 1961, p. 1-3

Finland does not have an ancient culture as ironclad, as clear-cut as Japan does. When the Japanese were writing sensitive poems and cultivating one of the most advanced civilizations in the world, the Finns were still wandering the endless wilderness of the North as hunter-gatherers. However, Finns do have something much more ancient. Something primal that was preserved in the memories of the sparse Finnish population for aeons. Something that resounds in the words of the Roman historian Publius Cornelius Tacitus (56-120 A.D.) almost 2000 years ago;

> *"[…] In wonderful savageness live the nation of the Fennians, and in beastly poverty, destitute of arms, of horses, and of homes; their food, the common herbs; their apparel, skins; their bed, the earth; their only hope in their arrows, which for want of iron they point with bones. Their common support they have from the chase, women as well as men; for with these the former wander up and down, and crave a portion of the prey. Nor other*

shelter have they even for their babes, against the violence of tempests and ravening beasts, than to cover them with the branches of trees twisted together; this a reception for the old men, and hither resort the young. Such a condition they judge more happy than the painful occupation of cultivating the ground, than the labour of rearing houses, than the agitations of hope and fear attending the defence of their own property or the seizing that of others. Secure against the designs of men, secure against the malignity of the Gods, they have accomplished a thing of infinite difficulty; that to them nothing remains even to be wished; […]"

Tacitus, *Germania*, ca. 98 AD (translated by Thomas Gordon in 1737)

It is unclear how much Tacitus really knew about the Fennians, and clearly his image is in the tradition of the "noble savage," a view that is infamous among anthropology for its controversies. Nevertheless, looking at still surviving hunter-gatherer cultures and primitive agricultural cultures, it is clear that the ancients were not so bad off at all (Sahlins, 1972). On the contrary, had they lived in destitution and hunger, they would not have had the time and resources to multiply. However, owning things and controlling stock creates inequality, and it is precisely this inequality that many of the primitive cultures so abhor (Sahlins, 1972). An old Eskimo proverb illustrates this mentality beautifully;

"[…] an Inuit from Greenland made famous in the Danish writer Peter Freuchen's Book of the Eskimo. *Freuchen tells how one day, after coming home hungry from an unsuccessful walrus-hunting expedition, he found one of the successful hunters dropping off several hundred pounds of meat. He thanked him. The man objected indignantly:*

"Up in our country we are Human!" said the hunter. "And since we are human we help each other. We don't like to hear anybody say thanks for that. What I get today you may get tomorrow. Up here we say that by gifts one makes slaves and by whips one makes dogs."[…]"

David Graeber, 2012, p.79

"Like whips make dogs, gifts make slaves." That primal happiness that Tacitus clearly adores, and tribal equality that depends on everyone's ability describes Finns and the traditional Finnish culture in a spot-on manner. That culture has then been slowly disrupted by settling down, agriculture, Vikings, Christianity, class-society, economics, politics, etc. However, as Finland slowly but surely turned to agriculture and became civilized, the men and women who could not stand this moved ever deeper into the woods, keeping the ancient culture alive while slowly retreating ever towards the North (Hurme, 2017). Thus, Finns took a long and slow road to civilization, and it is thanks to that long road that the yearning for the life in the woods has survived. In the face of this, is no small wonder that the traditional image of a Finnish dream is a life in a cabin in the woods, next to a lake, rarely having to meet with others than friends and family. How much more tribal can a dream be?

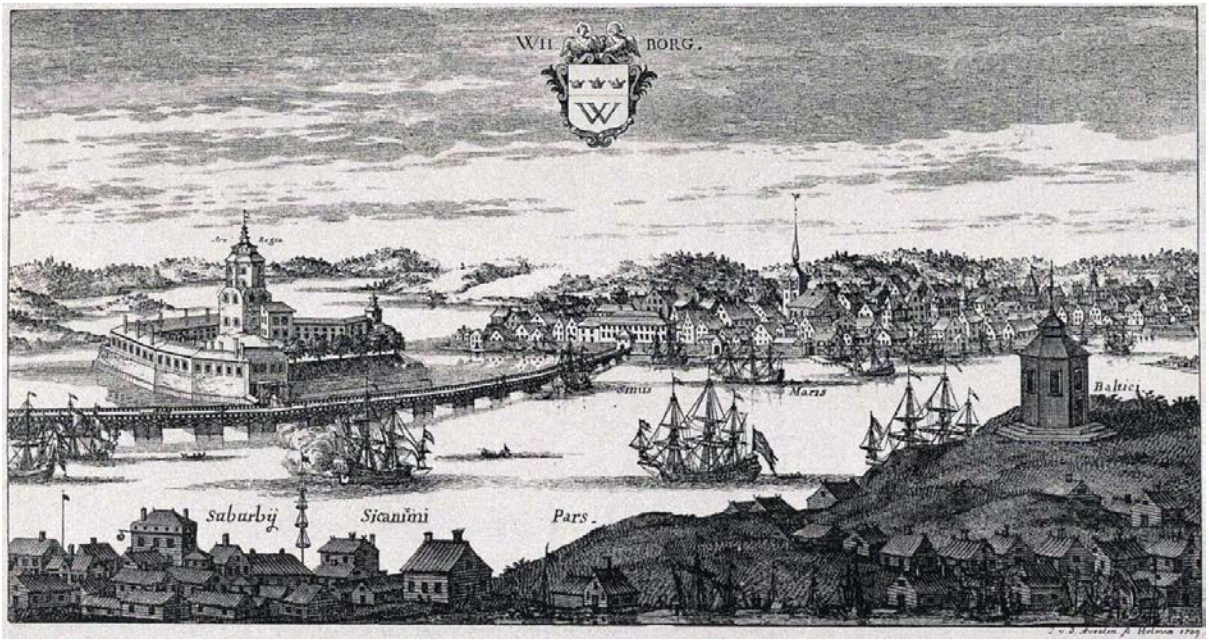
The Language of Architecture

Barrie Shelton is not the only one to speak about the connection between language and architecture. In his controversial book *"Learning from Las Vegas,"* Robert Venturi reminds us of the symbolism that is inherent in vernacular architecture. This fact is often forgotten, especially as the modernists of early- and mid-20th century were enthusiastically denying architecture of its symbolism. (Izenour, Scott Brown, Venturi, 1977) The clever modernist idea of architecture as "a sculpture big enough to walk through" was conceived only towards the beginning of the 20th century, in the wake of the invention of abstract painting and sculpture (Praz, 1974).

In fact, architecture even speaks a language of its own in a loud and clear voice to anyone trained to listen. Before the anti-architecture movement of the early 20th century, architecture in Europe was heavily tied to the social and philosophical contexts, following the cultural developments closely (Praz, 1974). This resulted in architecture having very deep symbolism in almost everything, from the arrangement of the plan to the fine details complicated embellishments. Mario Praz showcases a wealth of these instances in his 1974 book *"Mnemosyne; The Parallel Between Literature and the Visual Arts."* In fact, Praz goes as far as to consider architecture as "the leading art" in Europe until the 19th century. Perhaps the most dramatic of Praz's examples is the industrial revolution;

> *"[…] However, the study of form and technique far exceeds in interest the examination of subject matter; its importance in the development of nineteenth-century painting is not inferior to that of the study of materials and engineering processes for the appreciation of architecture. We watch, indeed, a parallel development in these two fields throughout the century: out of the bone heap of historical styles exhumed, blended, and mixed together, there arose gradually, as the sole reliable basis, mere structure, the work of the engineer; in the same way, out of the bone heap of traditional contents, the painter found a last hope in pure technique, thus reaching in the end that nonrepresentational standpoint in which art is still entrenched nowadays. […]"*
>
> Mario Praz, *Mnemosyne*, 1974

The impressive part is that these parallels also carry through to literature as well (Praz, 1974). Aesthetically, it could even be considered common sense to expect that something one sees every day, for example a building one lives in, heavily influences ones thinking. This is also a clear case of the feedback-loop between extelligence and the individual. For a very simple Japanese parallel, just look at the rims of the roofs in traditional Japanese buildings, and compare them with the Japanese characters, or to the sleeves of the traditional Japanese clothes; the slight curvature, and emphasis towards the ends is identical. Likewise, the Nordic architecture clearly emphasizes simple clean and straight lines in very much the same fashion as the alphabets we use.



Vyborg in the 17th century; Illustration by Erik Dahlbergh from *Suecia antiqua et hodierna* (Wikimedia Commons)

Matsudaira Residence in Edo from "View of Edo," a pair of six-panel folding screens, unknown artist, 17th century (Wikimedia Commons)

Much of the same applies to urban fabric, as culture appears to be such a holistic process, that nothing inside it can remain isolated. So many writers have surmised and concluded that urban structure closely resembles the people, the nation, the culture, and the administration, that it seems foolish to not take heed of this (Taipale, 2009) (Sorensen, 2002) (Koichi, 2005) (Kostof, 1991) (Shelton, 2012).

Regarding Languages; more terminology

There was a fundamental difference in the way Japanese and Finnish students of architecture saw urban planning. For the Japanese, urban planning was mostly limited to the design of the infrastructure, whereas most Finnish would also include the control over functions and aesthetics as well. One extremely strong component of these views lies in in the languages; Urban planning in Finnish is called ***Yhdyskuntasuunnittelu,*** and ***Toshi keikaku*** (都市計画) in Japanese. These two words are quite different in meaning, although both are indeed correctly translated into English as *"urban planning."* However, the literal translations are in fact quite different, and all the terms deserve a lot more attention than was given in the previous chapters.

The Japanese term *toshi keikaku* comes from two separate words, *toshi* (都市), meaning "a city," and *keikaku* (計画), meaning "a plan." Both above-mentioned words are compound words of Chinese origin. This already slightly lowers their emotional impact. Both parts are compiled from two characters each; *keikaku* consists of two characters, 計, *hakaru*, meaning "to measure, to plot, to plan", and 画, *egaku*, meaning "to draw a picture." In other words, *keikaku* contains nuances of calm,

calculated and measured action in abundance. *Toshi* on the other hand is less complicated, for 都, *miyako*, means "a capital, a metropolis," while 市, *ichi*, means a "market, a town." Thus, *toshi* includes a very heavy image of a big and thriving metropolis.

Bearing that in mind, *Toshi keikaku* is a very new word, only used for the first time in Japan as late as 1913, only 6 years before "the City Planning Law," *"toshikeikakuhō"* (都市計画法), the first official planning law of Japan came into power in 1919 (Watanabe, 2007). Back then, and from ever onward, the term has had somewhat cold, statutory and inhuman feel to it. In the words of Shun-Ichi Watanabe;

> *"[…] At the same time, the Urban Buildings law* (shigaichi kenchikubutsu hō) *was also enacted as the sister law of the [City Planning Law of 1919]; both together provided the statutory system for controlling the physical structure and space of Japanese cities.; […]"*
>
> Shun-Ichi Watanabe, 2012*,* p. 46

The *shigaichi kenchikubutsu hō* (市街地建築物法), "the Urban Buildings law" was basically a building code, that was enacted together with the City Planning Law of 1919, aiming to establish at least some standards of construction in a country which had none (Sorensen, 2002). Even though both laws have been drastically amended since then, this description still resounds well with the interviews. For the Japanese people, *toshi keikaku* means almost exclusively the planning of infrastructure, and little else.

On the other hand, the Finnish term *yhdyskuntasuunnittelu* is very different in tone indeed. It is also a compound word, consisting of two words, *"yhdyskunta"* and *suunnittelu.* The Japanese term *keikaku* and Finnish *suunnittelu* are not too far apart, although *keikaku* implies somewhat colder and more calculated nuances than *suunnittelu*. The main reason for this is that Japanese has plenty of words for emotional creation, whereas in Finnish *suunnittelu* is only one step down from artistic creation. *Suunnittelu* can for example easily be translated as "design" as easily as "planning."

However, the big difference comes with the first part of the words; *Yhdyskunta* could probably not be more different than the Japanese *toshi.* Without the suffix, *yhdyskunta* is a term that is rarely used outside of biology, and it means "a colony." Outside biology it also carries the meaning of "a community," although the word normally used for this is *"yhteisö"* in Finnish. Nevertheless, the nuances are there, and thus the literal translation of *yhdyskuntasuunnittelu* should probably be "community planning," if not even "community design."

Further, both languages are not really limited to these words in terms of urban planning. Finnish language also includes the word *Kaupunkisuunnittelu,* which literally translates into "City Design." This word should be understood as "urban design," and usually refers to designing singular spaces within city. Some however, including students of architecture itself as can be seen in the excerpts above, are not aware of the distinct meaning of the two words. Nevertheless, Finland belongs to the western school of urban planning, and thus there is not that much difference between "official" meanings of the English terms and the Finnish terms (Ushio, 2005) (Obase, 1997).

Japanese on the other hand has a very interesting word regarding urban planning in addition to *toshi keikaku*. This word, ***Machizukuri*** (まちずくり), is an entirely Japanese term, and among all the terms presented here, it is without doubt the most alien one to many. Based on the interviews, even the Japanese themselves are quite divided about its meanings, although most agree that it constitutes the other side of urban planning. The human, that is. *Machizukuri* is generally understood as being urban planning and maintenance originating from the citizens themselves, as opposed to government-led *toshi keikaku*.

Relying once more on Watanabe, *machizukuri* comes from two words, *machi* (町 or 街), meaning "a town, a city block, a quarter" and *tsukuru* (作 or 創 or 造), "to make, to produce, to create." However, to transcend all the confusing nuances and meanings of the differing Chinese characters, *machizukuri* is often written phonetically with the Japanese *hiragana*-script alone; まちずくり. Thus, *machizukuri* means "to create a town," especially with the word *tsukuri* (つくり) having very strong nuances of being hand-made if written like this; of being very personal and unique in character (Watanabe, 2007). And this is indeed so: The reader is well advised to, as we come to the *machizukuri*-movement towards the end of our narrative, remember that basically every *machizukuri*-project ever has been a unique one, with different beginnings, goals and methods, and have often been quite unlike all the other ones (Funk & Sorensen, 2007).

Regarding History; the Main Sources

In constructing the historical narrative, I have tried to be as neutral and fair to all evidence as possible. Where possible, a view that permits all interpretations to be simultaneously true has been opted for. Only in the rare cases where information from two sources has been downright contradictory have I omitted the contradictory part. Naturally, these accounts have been influenced by certain works more than others. So that the reader may fairly judge the credibility of this discourse, the major works of influence are presented here.

Regarding Japan:

Perhaps the most important work in relation to Japan is *"The Making of Urban Japan; Cities and planning from Edo to the twenty-first century,"* a book by André Sorensen in 2002. This book is a treasure trove of information regarding the institution of urban planning in Japan. Sorensen wrote it during 2000-2002 while working as a lecturer in Urban Planning in the University of Tokyo. The entire manuscript was also checked and corrected by Ishida Yorifusa, the leading expert in Japanese planning history.

Another view of the entirety of Japanese planning is a doctoral dissertation, *"Sensus Communis; A study on urban planning and its relationship to the history of communal ideology,"* written in Finnish by Ushio Koichi in 2005. Koichi worked extensively as a translator of philosophical books to Japanese, and had very wide expertise regarding philosophical developments. As Japan isolated itself for centuries, the philosophical developments were naturally meagre at best. Thus, his account is very critical of the Japanese model.

On the other hand, a highly positive account is provided by *"Learning from the Japanese City; Looking east in urban design,"* written by Barrie Shelton in 2012. Shelton introduces many of the ingenious innovations Japanese cities have over western cities, the historical background of those innovations, and the reasons why Japanese cities have fascinated many prominent western architects, such as Bruno Taut, Walter Gropius and Frank Lloyd Wright. Shelton also presents a novel, and very convincing theory between culture and architecture, that I have chosen to adopt in this discourse as well. The positivity in Shelton's work very nicely balances the other two.

A final addition to these works is the *"Living Cities in Japan; Citizens' movements, machizukuri and local environments,"* a compilation of essays regarding Japanese cities and urban traditions by several esteemed writers. The subjects range from politics to economy, from proper urban planning to the Japanese *machizukuri* grassroots organizations etc. This compilation provided the much needed colour to the historical narrative.

Regarding Finland:

The earlier history of Finnish cities is largely taken from *"Suomen kaupunkirakentamisen historia,"* a colossal and comprehensive 2-volume collection of articles by several esteemed historians. The work was edited by Henrik Lilius and Pekka Kärki, and it was published in 2014. This historical account of Finnish cities until the end of 19th century is as comprehensive as can be, and it has acted as the backbone of the historical narrative of Finland. As there are several writers, the tone of the book is ultimately quite objective and neutral.

An article similar to Sorensen's work on Japanese planning regarding Finland is *"Urban Planning in Finland after 1850,"* an article by Mikael Sundman from a 1991 book *"Planning and Urban Growth in the Nordic Countries."* While not as extensive as Sorensen's account, Sundman's article very neatly recollects all the Finnish planning activities, as well as the sources of inspiration for each movement. In the end, Sundman's recollection is somewhat on the negative side.

History of Finland itself is provided by *"Suomen historia; Jääkaudesta Euroopan unioniin,"* a book by Jouko Vahtola published in 2003. Since most of the works regarding Finland did not include many historical references, unlike Sorensen's and Shelton' works, Vahtola's comprehensive historical account was used to put the years and worldwide events in order. Some statistics were also taken from Vahtola's work.

Ushio Koichi's work naturally also provides equal amount of information about Finnish urbanism and development of philosophical thought as it does on Japanese equivalents. Where Koichi's view is highly critical of Japanese urban planning, he is quite positive about Finnish cities and planning practises.

A final addition to these works is *"ヘルシンキ／森と生きる都市, (Helsinki/City in the Forest),"* a 1997 compilation of essays by Japanese and Finnish writers regarding Finnish cities and planning, with an emphasis on Helsinki. Especially Obase Reiji's article on Finnish planning is eye-opening in its fascination of Nordic planning practises. This compilation brings some very welcome Japanese insight into Finnish urbanism. It is very regrettable that similar Finnish insight into Japanese urbanism was unavailable.

Naturally, research was not not limited to these works, but these held more sway than others in most cases. Most statistics are taken from the national statistics centres and archives. Please refer to the end of this work for a full list of references.

History of Urbanism in Japan and Finland; the Historical Narrative

"Past is a different country; they do things differently there."

L. P. Hartley, *The Go-Between,* 1953

World has been global for ages. In ancient Greece, it was not at all uncommon to leave for an excursion in Persia or Egypt. Simultaneously the Phoenicians built an extensive network around the whole Mediterranean. Meanwhile culture was booming from India to China, and ideologies found their way from China to Greece, and back, as can be seen from the similarities in philosophical thinking (Ushio, 2005). At its largest, the Roman empire encompassed all of Mediterranean, from the shores of the Indian Ocean to Scotland. In turn, the merchants of early Islam did business in no small amount from Europe and Africa all the way to China, and it can even be argued that the enormous demand for silver in China created the whole conquistador exploitation of the Americas (Graber, 2014). Vikings were cosmopolitans, managing trips all the way to North America, Africa and India from 8th to 11th century. The Mongolian empire of the 13th and 14th century was the greatest the world has ever seen, expanding from eastern Europe all the way to China and the Pacific Ocean.

Finland and Japan have both been part of this ancient globalism as well, but they both remained at the edges. This is curious, as both nations had all the perquisites to become very important players some 1000 years ago. Finland held a commanding geographical position in the Baltic in relation to the Viking trade routes to East, to the Black sea and beyond via Novgorod. On the other side of the world, Japan was in an ideal position to rule the western Pacific coastline all the way down to Malaysia and Indonesia, perhaps even to Australia and India. Vikings certainly managed a similar feat in Europe. However, the problem was that neither nation really existed as a unified nation at the time. There simply was no Finland 1000 years ago, and while Japan did exist, it was deadlocked in a constant on-off civil war (Ushio, 2005). Ironically, this was probably because of population; Finland had too few people to amount to any form of centralised governance, barely 20-30 000 at the time, while Japan may well have had too many for an archaic government to reign over successfully, from 4,5 to 7 million!

Consequently, both were also late-comers, or perhaps late-bloomers, to industrialism and modernization in the 19th century. Before this turning point, both nations remained quite isolated in fact. In Japan, the policy of isolation was established in 1633-39, and then extremely forcefully enforced by the *bakufu* (幕府), the government led by the fearsome warrior-class, the *samurai*. Finland on the other hand steadily became an integral part of the Swedish kingdom after the Viking age. And while Sweden was a major player in the politics of Europe, Finland still did not exist a before 1809. As the eastern part of the Realm, *land of the tribal Finns*, was mainly a big, densely forested, and largely empty, buffer-zone towards the Empire of Russia. Any new innovations took their time in arriving, but ultimately arrive they did.

Ukiyo-e “47th station: Seki (関)” from “The 53 Stations of the Tōkaidō” by Utagawa Hiroshige (歌川 広重) in 1833-34; The people on the foreground could just as well be tourists today, arguing where to go next, and who does what. (Wikimedia Commons)

There is but one final reminder left: History is weird. In the words of L. P. Hartley inscribed above; Past is a different country. Simply put, we often forget just how similar to modern people the people of the past ages must have been, and at the same time, just as easily, we tend to forget how alien the cultures must have been. For example, evidence from Edo-period Japan suggests everyday life rather similar to modern one, consisting largely of sleeping, eating, working and having all kinds of fun in the spare time. Especially the *ukiyo-e* (浮世絵) woodblock prints, that were originally made for the merchants and artisans, but owned by almost everyone in late Edo-period, capture this kind of ordinary and everyday life so vividly. In fact, the imagery is so in line with the modern world, that it actually feels a little uncanny, as if the artist was forcefully trying to put a modern vibe into the ancient setting. It appears that Man the individual has not changed much with time.

And yet the world of history is completely different from the modern one. We often do not even really understand our own local modern culture, because it evolves so quickly. As such, cultures of the past must have been, in a word, unfathomable. For instance, in the Edo-period one could relatively easily have one’s head chopped off in the street without anyone crying *“Murder!”* Or, there were people whose station was so much above or below you *by law,* that they might just as well not exist in your perception of the world. We are aware of some (probably a whole lot less than we think) of these differences, but there is a difference between knowing and *Knowing*. It is different to know of a curious fact, and to actually have experienced it, to have lived it.

Ukiyo-e “Artisans” by Utagawa Kunisada (歌川 国貞) in 1857; depicting a print-shop making Ukiyo-e;
Again, great effort has been put into the life-like interaction between the characters. (Wikimedia Commons)

Similarly unfathomable aspects would of course have taken place in Europe, Americas, Africa and rest of the Asia as well, but we often tend to forget that the same is true for not only all places, but for all times as well. We like to think we know how the world was like a hundred years ago, but in fact we are fast forgetting what life was like before the World Wide Web. Which, by the way, was released to general public in very crude form only in 1990, less than 30 years ago! While Man the creature has seemingly not changed at all for the past 5000 years, his Culture seems to be changing without a pause at a breakneck pace.

Thus, it is not my objective to paint as realistic, vivid and believable picture of the past ages as possible. Instead, my aim is to show glimpses of the unchanging man in the ever-changing flow of culture to better enlighten the origins of modern Japan and Finland. That is the only way in which at least somewhat comprehensive image of modern urbanism in Japan and Finland can be illustrated. Otherwise the image will always be one-sided, with the right bits and pieces but without the glue of culture that holds it together.

Structure of the Timeline

Especially for the western reader, the Japanese calendar used in this story must feel somewhat odd. However, this choice highlights some of the curious parallels with Finland and Japan, as many key-developments take place simultaneously. One big exception exists though, and that is between the Meiji-period and the Imperial Grand Duchy of Finland. In that special case we must improvise a little, but otherwise the parallels hold uncannily true.

But, without further ado, let us begin the story:

Medieval period (until the 17th century)

Although the term "Medieval" is commonly used all around the globe, it usually refers to different periods of time depending on the nation and writer. For example, the Finnish medieval period is commonly located at the later part of the European medieval period, roughly from the 12th to the end of the 15th century. In turn, Japanese medieval period is commonly located before the Edo-period, from the 12th to the start of the 17th century. Nevertheless, our story begins in the late medieval period, at the end of the 16th century, and this is how the stage has been set:

In November 1520, the Danish king Christian II betrayed his promise of general amnesty, and had some 100 nobles executed. This event became known as the Bloodbath of Stockholm, and it inspired the then Swedish nobleman Gustaf Eriksson to rebel against the tyrannical king. in 1523 he became the king known as Gustaf I of Sweden (1496-1560), or later as Gustaf Vasa, and he made the royal crown an inheritable property. Before this, the king had always been chosen in the old Viking manner; by voting. Some argue that this northern Germanic tribal method of choosing a king, and settling disputes between members of the tribe are the very foundation of modern western democracy and justice (Ushio, 2005). The great Kalmar Union, which was a union of the kingdoms of Denmark, Norway and Sweden, with part of Finland included with Sweden, was finished.

From here on Finland was officially the eastern part of the realm, and as such an inseparable part of the Swedish kingdom in terms of reign, law, justice and society. This also included the urban traditions as well, although Finland was sparsely populated and extremely rural at the time (Sundman, 1991). The population of Finland was roughly 300 000, and some of these people still lived in the forests as hunter-gatherers instead of relying on agriculture (Vahtola, 2003). It was the coastline that boasted the most civilized and urban culture in Finland; 6 settlements with city-privileges; Turku, Ulvila, Porvoo, Vyborg (Viipuri), Rauma and Naantali (Sundman, 1991).

During Gustaf Vasa's, and his followers reign, many more cities were founded. Among these were Helsinki, which was founded in 1550 by the order of Gustaf Vasa to compete with the northernmost member of the Hanseatic league, the ancient trading city of Reval on the other side of the Gulf of Finland. This city would later become the modern capital of Estonia, Tallinn. However, the project did not proceed too well, as Estonia fell under Swedish rule in 1561, only 11 years after the founding of Helsinki, and one year after the death of Gustaf Vasa. For over two centuries Helsinki remained a small fishing settlement of some dozens of cottages. Turku would be the capital of the eastern part of the realm until the 19th century, for it was already well established, much closer to the motherland, and much further away from the Empire of Russia. (Vahtola, 2003)

Meanwhile, Renaissance was in full swing in Europe, and numerous ideologies were sweeping through the continent. In the coming centuries all over Europe brave individuals would start to question the church and its authority in many aspects. Sweden would also see these waves of culture and science beaching in the North, but at a somewhat slower pace, with some exceptions: Martin Luther, the founder of Lutheran church, was already towards the sunset of his life. He died in 1546, but before his death two very strong men had almost simultaneously broken ties with Rome and the Pope; Henry VIII of England, and Gustaf Vasa of Sweden. Ergo, the official religion in Finland was protestant Lutheranism. However, Finns had not abandoned their old animistic beliefs in the past, and were not about to do so anytime soon either. This pluralistic view on religion is another interesting trait that the Japanese and Finnish share. It should also be noted that Gustaf Vasa himself was not exactly a man on a grand mission from God, but instead more interested in the riches of the catholic church as a means to pay the crown's debts, which were fast getting out of hand.

Christopher Columbus (c.1451-1506) had already found America, and the conquests of Hernán Cortés (1485-1547) and Francisco Pizarro (1476-1541) had just started into the American Indian empires. Untold tons of gold and silver were transported from the Americas between 1520 and 1640, but very little of this cargo ever even landed in Europe; most of the gold ended up in temples of India, and most of the silver went to the mints of China to produce enough coin for the economy to run properly (Graeber, 2012). Credit was about to become much more widely used, and fiat money was starting to appear once again, after the violent and unforgiving medieval period during which even simple credit is very hard to acquire. European influence was spreading like wildfire.

The existence of Japan was also known to the Europeans, and Portuguese missionaries and merchants first landed in Japan in 1543, bringing technology, news of the world, and of course the word of God. In turn, the Japanese were interested in Europeans as brokers between Japan and China, as well as their technology. However, the relationship was an extremely unstable one. To see Christian missionaries and their followers brutally executed in throngs was a common happenstance, even when the same Christians had received an explicit permission to build a church and hold congregations only a decade ago (Ushio, 2005). The very name of this trade, *nanban bōeki* (南蛮貿易), reveals the sentiments that the Japanese held towards the Europeans: *"The Southern Barbarian Trade."*

This sentiment is somewhat easier to understand with a small explanation. Japan had been deadlocked in a virtually nonstop civil war from 1467 onwards, starting with the *ōnin no ran*, (応仁の乱) civil war, in which the status and position of the *shogun,* the military governor of Japan, was compromised (Ushio, 2005). This Civil war only lasted until 1477, but it was quickly followed by others. The relatively peaceful ages were long past, and everyone in power and with influence was vying to better his and his clan's station in Japan. Suspicion and distrust were ever present. It was under this situation that the Europeans came to spread their influence as well, and they were simply treated just as ruthlessly as everyone else was back then.

The Japanese civil wars, and the *Sengoku*-period (戦国時代), or "the Warring States period," comes to an end in 1603 with Tokugawa Ieyasu (徳川家康) finally unifying Japan under a solid and credible government. The position and status of the *Shoguante* has been restored its rightful importance. However, this period of over hundred years of civil war has not left the Japanese untouched. Tokugawa Ieyasu is the perfect example of the kind of leader that can be expected to come out of such an ordeal. Unfortunately. To understand this misfortune, some elaboration is required.

The three figures of unification, that one absolutely has to know in Japanese history are; Oda Nobunaga (織田信長) (1534-1582), Toyotomi Hideyoshi (豊臣秀吉) (1537-1598), and Tokugawa Ieyasu (1543-1613). These three men created the Edo-period, and arguably the Japan we know today (Ushio, 2005). Oda Nobunaga was a masterful strategist, and a ruthless psychopath, who managed to stabilize the central Japan via several do-or-die battles, and serious intimidation. Even though Hideyoshi started out as a simple sandal bearer to Oda Nobunaga, he ultimately proved himself the greatest tactical mind in Japan, and orchestrated himself into position similar to that of *shogun* after Oda Nobunaga was assassinated in 1582. Tokugawa Ieyasu and Toyotomi Hideyoshi were good friends in turn, but after Hideyoshi's passing, Tokugawa Ieyasu wasted no time in grabbing the seat for his clan. Toyotomi Hideyoshi's ultimate downfall was that he had no adult children at the time of his passing. (Ushio, 2005)

In 1591 Toyotomi Hideyoshi decrees the so called "Separation Edict." This edict itself does not decree specific castes, but it punishes anyone who tries to rise above or fall below his station, as well as all who help in such endeavours. Should the offender not be found, usually either several people are required to take his place for a capital punishment, or the whole village is severely punished. It was

the *Tokugawa Bakufu* (徳川幕府) (the soldier government; the junta) that later decreed the specific castes, but the "Separation Edict" is very likely the beginning of the caste-system.

During and before the Sengoku-period it was perfectly normal for farmers to turn into *samurai* through wealth and opportunity, and *samurai* to take up farming in times of great uncertainty or despair. As no restrictions were placed on the livelihoods of men, social mobility was extremely high in ancient Japan. As it turns out, Toyotomi Hideyoshi himself was of lowliest imaginable peasant origin himself, and perhaps exactly because of that experience he wanted to stabilise the country. Prior and after the "Separation Edict" enormous sword confiscations were conducted, and all the swords owned by farmers were melted into bells or statues of Buddha. This way Toyotomi disarmed any ambitious men like himself, as well as any possible future rebellions, in arms and means alike. (Ushio, 2005) This end of social mobility is but the start of the oppression of common people that was to go on for centuries during the Edo-period.

An extra notice should be paid here to Japan and international affairs. Even though Japanese were interested in Europeans as brokers between Japan and the surrounding countries, it is a common misconception that Japan was unwilling or unable to interact with surrounding nations throughout history. Quite the contrary in fact. Japan used to be quite international before the Edo-period: Many Chinese and Korean craftsmen, especially carpenters, worked extensively in the Japanese armies, and Japan had many colonies offshore, in Indonesia, Malaysia and one as far as Peru (Ushio, 2005)! Furthermore, Toyotomi Hideyoshi had a vision of a massive Japanese empire that spread out from the Japanese isles. To realize this vision, and to occupy the warlords that were without a war to fight after the unification of Japan, he tried to invade China via an invasion to Korea in 1592-93 and again in 1597-98, only to be thwarted by one of the greatest admirals in world history, admiral Yi. The invasion might have succeeded had it been seen to its definite conclusion, but alas Hideyoshi died in 1598, and after that almost everyone in Japan unanimously decided to abandon the Korea campaign. Soon after, Japan was closed to foreigners for good.

Finland was not without its counterpart to the Civil War of Japan; After Gustaf Vasa's death, his three sons became engaged in a complicated quarrel over the crown of Sweden, Finland, and potential inclusion of the Polish-Lithuanian Commonwealth under one crown:

In death, Gustaf Vasa left his throne for his eldest son, Erik XIV (1533-1577), and made Finland a dukedom to his second son, John III (1537-1592). Erik began to harbour serious doubts about his brother, as he married a catholic Polish princess, Catharine Jagiellon (1526-1583), a daughter of Sigismund I, the king of Poland, and sister to Sigismund II, the king of Polish-Lithuanian Commonwealth. Should John become the king, Sweden and Poland could well be united under one crown after all. Erik invaded Finland in 1563, and imprisoned John. The paranoia of Erik however only increased with time, and in 1567 the nobility betrays Erik after he openly murdered several nobles. *Riksdag of the Estates*, the assembly of the estates of Sweden, dethroned Erik, and recognized John III as the king of Sweden in 1569. Consequently, Erik was imprisoned until the end of his life.

While imprisoned, John and Catherine had 3 children, the last of which would become Sigismund III Vasa of Poland (1566-1632). Having become the king of the Polish-Lithuanian Commonwealth and wanting to unify Poland and Sweden, Sigismund succeeds John III as the rightful king of Sweden in 1592. However, he had already been chosen as the king of catholic Poland earlier, and he did not want to move to Sweden yet, fearing the Swedish nobility who had largely been against the idea for over a decade. Interestingly, Finnish merchants and nobility were however sympathetic to Sigismund under the command of Klaus Fleming (1535-1597), the Lord High Constable of Sweden, as well as Marshal and Governor of Finland and Estonia. Union with Poland-Lithuania would certainly have improved the

relationship with the imposing Empire of Russia. While the Swedish privy council, including Klaus Fleming, ruled Sweden in the name of Sigismund from 1592, the last of Gustaf Vasa's sons, Charles IX (1566-1632), was alarmed by the catholic Sigismund, and the Polish-Lithuanian Commonwealth, and mobilized against Sigismund together with the rest of the Swedish nobility.

In the power struggle against Sigismund, Charles incited the Finnish peasants to rebel against the Finnish nobility. This rebellion was brutally crushed by Klaus Fleming in what is later known as the "Cudgel War" (*Nuijasota*) of 1596-7. The rebellion ended with around 3000 casualties on the rebellion side, or roughly one percent of the Finnish population of the time. Nevertheless, after some back-and-forth warring in Finland, Charles managed to capture Finland in 1599, thus ending Sigismund's designs to the throne of Sweden. This issue of high treason continued to incite much agitation between Sweden and Polish-Lithuania Commonwealth in the coming century as numerous rulers wanted to re-unite the two. Charles however become the regent of Sweden and punished the treacherous nobility ruthlessly. The dukedom of Finland was abolished, and Finland was joined to Sweden proper once again.

Even though this game of political intrigue was equally deep and complicated with the *Sengoku*-period, the Japanese civil war, it had much less impact on the Finnish ethos and mentality. After all, most of the Finns were almost tribal; some had not even taken up agriculture. Furthermore, unlike the mountainous isles of Japan, with their easily comprehensible valleys, there were no reliable maps of the vast wilderness that was Eastern Sweden back then; towards the eastern border of the realm, no one knew whether they were in Sweden or in Russia, and both were equally ransacked in turn by Swedish and Russian raiding parties. Also, the northern part of Finland was not really considered part of Finland back then either, so especially in the wilderness of the north, the Finnish tribal heart that Tacitus so vividly described *still* lived strong.

Urban planningwise, nothing of great importance was going on in either nation. Finland was too sparsely populated to amount but to a few urban settlements before the reign of Gustaf Vasa and his sons. Most Finns lived in small villages, where they helped each other to grow crops, as the open-field system (*sarkajako*) common to most European nations in medieval times was in use. To balance bad and good lands between everyone in the village, everyone was given a long strip on every field, and work was done in concert (Vahtola, 2003). This naturally herded the peasants to form small villages in the middle of the shared fields. However, these villages were too small to yet require nor utilize any form of real planning. Even the several towns founded during Gustaf Vasa and his Sons reign were small and unremarkable. These were but a preliminary to the true drive for urbanization during the 17th century (Sundman, 1991). The three big urban centres were Turku, Vyborg and Porvoo (Niukkanen, Seppänen, Suhonen, 2014).

Likewise, Japan was far too preoccupied with the war to concentrate on building big urban centres. Both the population and urbanization ground to a halt, and most architectural effort and innovation was diverted to military purposes; to castles, armies, and siege weaponry (Ushio, 2005). Japan already had some history with town planning in the grand scale; *Heijō-kyō* (平城京; later Nara) was established during the Nara-period, in 710, and *Heian-kyō* (平安京; later Kyōto) during the Heian-period, in 794. Both were founded according to the Chinese tradition, in an extremely cleanly laid out gridiron plan (Sorensen, 2002). However, while the *kyō* (京) in both words means "capital," and Kyōto (京都, meaning "the true capital") indeed remained de facto official capital of Japan until Meiji-period, the gridiron plan never stuck (Ushio, 2005). One reason for this could be the Japanese terrain, which was quite unsuited for the neatly organized squares spreading as far as the eye can see.

Carta Marina, by Olaus Magnus in 1539. The caption reads: "*Marine map and Description of the Northern Lands and of their Marvels, most carefully drawn up at Venice in the year 1539 through the generous assistance of the Most Honourable Lord Hieronymo Quirino*." (Wikimedia Commons)

Both nations built extensively with wood, which is a tradition that is to continue for centuries, with all the expected benefits and disadvantages (Sorensen, 2002) (Ushio, 2005) (Sundman, 1991) (Niukkanen, Seppänen, Suhonen, 2014). This was largely due to the climatic and environmental reasons.

Finland is a very stable country with relatively cold winters. Without extensive knowledge and skill in housebuilding the northern wilderness is uninhabitable. Stonework in turn would have taken far too much time and effort to do it properly for an individual, or a small group, who were preoccupied with other duties as well. A mason was a highly specialized profession, and nevertheless, stone is quite uncomfortable building material in the cold of winter. Instead, houses are made of logs, which are in ample supply, somewhat easy to craft, an excellent building material in the dry Finnish climate, summer and winter alike.

On the other hand, Japan is hot and humid, which is not ideal for wooden structures. However, Japan has a unique impassive quality to its environment, that has decreed much of Japanese architecture for ages; Earthquakes. Almost all traditional Japanese architecture tends to be 'heavy' in character and oriented towards the ground, rarely exceeding two stories even in urban environments (Shelton, 2008). Furthermore, as most of Japanese rock tends to be brittle and crumble easily, wood and paper start to seem very reasonable building materials; they are easy to build with, more adaptable to tremors, easy to clear, and readily available on the three isles of Japan, Kyushu, Shikoku and Honshu. Just like in Finland, in a way, the northernmost isle of Hokkaido was still sparsely inhabited wilderness, where the tribal *Ainu* (アイヌ), then called *Ezo* (蝦夷) lived.

Curiously, *Edo* (江戸), which is later renamed as Tokyo, and Helsinki both exist at the turn of the 17th century, but both are small settlements of unremarkable hovels bunched together in nowhere important. However, that similarity is about to end, as the next period in Japan gets its name from the new capital of the *Tokugawa Shogunate*, although Kyōto remains the home to the Emperor, and ergo the official capitol. Nevertheless, Tokyo is about to explode, and Finland too is about to witness unforeseen urbanization. In such a setting the 17th century, and the Edo-period thus began.

Edo-period (1603-1868) & the Swedish Empire

A new century was upon the world. 1601 was called “the straw year” (*olkivuosi*), and it was one of the worst famine years in Finnish history, the coldest in 600 years in fact. Finland had recently been devastated by political turmoil as well, as Charles IX was mercilessly punishing the treacherous nobles, both in Finland and Sweden alike. He became the regent in 1599 after prevailing over Sigismund in Finland, and was finally made the king by the *Riksdag* in 1604. In Japan, Hideyoshi Toyotomi had died in 1598, his campaign in Korea hastily abandoned in 1599, and Tokugawa Ieyasu was efficiently removing the last obstacles to his power. The decisive battle, the *Battle of Sekigahara* (關ヶ原の戰い) was fought in 1600, in which majority of the opposition is finished off. Ieyasu himself became the shogun in 1603, only to retire 2 years after. The age of civil war was about to step aside, and a new age about to start in Sweden and Japan alike.

Because Edo period is referred to as a single period here, a clarification must be made. In Japan, Edo-period is indeed a unitary period of over 250 years of continued, isolated and uninterrupted cultural evolution. However, in Sweden the period is coloured by continuous international war, and it may first seem irrational to lump all of those periods together into a single one. But, if we change our perspective, a common denominator appears; Edo-period hosts the rise and fall of both the *Tokugawa Clan*, and the *House of Vasa*. It is precisely for this reason that it is befitting to talk of this period as one, for it gives us a possibility to look at the consequences of over 250 years of rule under a single family; the *Clan Tokugawa* in Japan, and the *House of Vasa* in Sweden.

Unfortunately, here we come to a minor discontinuity in our story, as the House of Vasa falls somewhat earlier than the *Tokugawa Bakufu*. Consequently, Finland takes a 60-year head start in entering the next period, which it does already in 1809. This is not a major problem however, because Edo-period, particularly the 17th century presents unprecedented urbanization in both Finland and Japan alike. It is during this first century of the period when the long-lasting urban traditions of both nations are forged. For more than a century thereafter, as these traditions are refined ever further, almost no new ideas enter the culture of urbanization in either nation. It is the extreme length of the period that makes it so important, as the ideas are allowed to take deep root in the culture and the extelligence, in the ethos of the people. Even though, the background of cultural evolution could not have been more different between the two.

Because of the length of the period, this chapter is also without doubt the longest in this thesis, and thus it must be sub-divided accordingly. The first part will talk of the world, the culture and the politics of the period. The second will address the unprecedented wave of urbanization, and the third the city itself, its image, its problems, and its buildings.

The World

Edo-period is the foundation of Japanese culture, in both good and bad. While most Japanese idolize the Edo-period like little else, it also hosts some of the arguably worst developments in the history of Japan. Particularly the totalitarian and oppressive government that shut the rest of the world out for more than two centuries comes to mind, as it virtually froze the intellectual development of the country completely (Ushio, 2005). Sciences ground to a halt, philosophy stops evolving and there was but a little hint of learning from the outside world. A small minority ruled over the common people in a ruthless, unquestioned manner.

In Japan, Edo-period was above all else the age of the *samurai* warrior-caste. Following Toyotomi Hideyoshi’s “Separation Edict” decrees in 1591, the *Tokugawa Bakufu* decrees the specific castes; (in order of importance) *samurai* (侍) (warriors), *hyakusho* (百姓) (peasants), *shokunin* (職人) (artisans),

shōnin (商人) (merchants). As Edo-period progressed however, it quickly became difficult to distinguish between artisans and merchants, and a common name for both emerged, *machinin* (町人), roughly meaning *a burgher*. Below the castes there were also the *eta* (穢多), the casteless, who do all the menial and unacceptable work, like working on animal carcasses, handling night soil, etc. Social mobility was forbidden on the pain of death, or even worse, with *surrogate victims*:

"Separation Edict" was far from being the only law that decreed widespread punishments for an offence by an individual, but it was most likely the one that started the tradition. As Edo-period progressed, the most concrete manifestation of this phenomenon were the *Go-nin-no-kumi* (五人の組), "the groups of five," into which all the commoners were to be divided. In effect, the whole group was punished for an offense by any single member of the group, should they not report the offender to the authorities immediately after detecting an offense (Ushio, 2005). Despite the name, the groups could be of any size, and the tradition had its origins in the old taxation system, which taxed villages instead of individuals (Sorensen, 2002). Such Machiavellian measures quite obviously had some very serious lasting impacts on the common folk, and their ethos.

Farmers were the origin of the *samurai* warriors, their alter-ego even, and thus considered second only to the *samurai* in importance for growing the food by which everyone lived. Unfortunately, fine words did not match with the harsh reality: The famous statement "*Let them not live, but let them not die either"* was the approach taken by the government in controlling the farmers (Ushio, 2005; Sorensen, 2002). As the *samurai* stopped waging war and moved to cities to become bureaucrats managing the state, the connection between the farmers and the *samurai* was completely severed. The duty of building the great castles, roads and bridges, their upkeep, production of food, waterways and riverbanks, almost every kind of menial task was delegated to the farmers. While the farmer rebellions were oftentimes decently successful in the 15th and 16th centuries and before, in the Edo-period they were violently crushed in each and every occasion, with all the ringleaders killed without exception (Ushio, 2002).

Already we can see a massive difference between Sweden and Japan emerging. As the reader will easily recall, all the previous Swedish kings were approved, and quite often dethroned as well, by the *Riksdag* in Sweden. This assembly of the estates was extremely important to the development of the Scandinavian ethos, as it was the first, and for a long time the only, assembly of the estates that included the peasants (Ushio, 2005). Although the informal tradition had started already in 1435, Gustaf Vasa assembled the first official *Riksdag of the Estates* in 1527. This meeting was based on the Viking *"Things"* (*þing, ting; käräjät*) where folk would gather and discuss justice, politics, law, past, present and the future. Unlike other rulers of the time however, Gustaf Vasa invited all four estates, Nobility, Clergy, Burgesses and Peasants, and made the *Riksdag* the second highest authority in Sweden, second only to the king. As this tradition was never once broken, probably thanks to its long roots in the Viking age and the sparsity of population, it gave the peasantry of Fennoscandia the ethos of having a say, a real influence in politics.

Nevertheless, the Japanese idolize the period because of the birth and prosper of the truly Japanese culture. After the taxing century of civil wars, it was turn for commerce to thrive, culture to flourish, and, as a direct result, material culture reached an unbelievably high level of quality benefitting virtually all Japanese. For example, even most of the poor were living on the elevated floors atop *tatami*-mats (畳) by the end of the period (Sorensen, 2002; quoting Hanley, 1997). This contrasts strongly with the earlier ages of civil wars, during which most lived on either bare ground, or elevated but bare wooden floors. Ergo, Japan evolved as an individual country with strikingly unique cultural differences to neighbouring countries.

Furthermore, if Edo-period was the age of the *samurai* on one side of the coin, then on the other, hidden side were the merchants. Considered the lowest of the 4 classes because they did not produce anything out of their own labour, the merchants played a very interesting role throughout the period. One of the virtues of the *samurai* was disregard for monetary issues. As the country was completely shut off from the rest of the world, and the *samurai* were in complete control of the whole country, money was ultimately useless to them. The *samurai* received their wages and stipends in rice, measured in *koku* (石; a unit of volume, roughly 287 litres), with one k*oku* considered to be the amount of rice that would feed one adult person for a whole year (nearly a litre of rice every day).

The use of food as currency among the ruling elite highlights an enormous difference in Japanese thinking against western thought; the complete separation of politics and economics. Almost all tax revenue of Edo-period was collected from land-taxes. As such, handicrafts, clothes, consumer goods, food and similar products were left completely tax-free, resulting in a very different approach to urban traditions when compared to the west (Sorensen, 2002). In effect, independent city-based merchant class government was never established. *Samurai* governance had every sliver of control over cities in their hands, whereas it was specifically the merchant class that controlled the cities in the west. In other words, merchants never had the chance to make cities into their own political entities that were on equal footing with the blue-bloods (Ushio, 2005).

Ushio places great emphasis here, as the philosophical development in Japanese thinking virtually halts for the duration of the entire period. It is often the merchants who circulate information and news in any given culture, thus acting as an important catalyst for cultural, philosophical and technological development and innovation. The *Tokugawa Bakufu* however did everything to stop power from decentralizing, including barring foreign philosophical thinking from 'corrupting' the minds of the Japanese. For example, Christian teachings were judged harmful mainly for emphasising strong individuality. To make matters worse, it was specifically the rebellious *daimyo* (大名; feudal lord) of the southern Kyushu that were very interested in Christian teachings, and in western culture in general, thus encouraging severe restrictions on them. If nothing new develops, then there should be nothing that could blindside the government from the shadows. That was the driving ideology of the *Tokugawa Bakufu.*

Another interesting aspect to point out here are the demographics of Japan during the Edo-period. The population of Japan before 1721 is a mystery, with estimates ranging from 12 million to almost 20 million on the eve of Edo-period. The first reliable official survey by the government was conducted in 1721, and the figure was updated every 6 years ever since almost unfailingly. Interestingly, from 1721 until 1846, the population stays at a surprisingly steady 25 to 27 million, fluctuating up and down, and then, in the beginning of Meiji-period, suddenly jumping to 33 million in 1873. Because of the cruel treatment and extremely high taxes (40% for most of the time, but rising as high as 70% from time to time), the farmers were known to have often murdered their own children in tough times, both out of pity and necessity (Ushio, 2002). That is a cruel proof to just how harsh the treatment of the farmers was during the Edo-period.

The *samurai*-commoner ratio of Edo-period is commonly considered to have been just over what was needed to keep the system stable while still in favour of the *samurai*. It is commonly thought that roughly 3-5% (some claim numbers as high as 10-20%) of the population were either *samurai*, or their direct servants, with the exact number being very hard to put down for two reasons; one, before the 1721 population consensus there was no clear idea of the total population in the first place, and two, the exact *samurai* population was considered a military secret in every province (Sorensen, 2002). However unclear the figure may be, it certainly contrasts strongly to the rough 1-2% of population

that enjoyed similar privileges in medieval France (Ushio, 2005). This difference is thought to have contributed significantly to the stability of the period.

Ultimately, it cannot be stressed enough how unique and special the Edo-period is for Japan. This argument goes beyond whether the period was good or bad for the nation. Instead, it highlights the amazing occurrence of over 250 years of steady, relatively peaceful and uninterrupted cultural development in a global world fast shrinking, and the powerful impact such a long and steady period had. It is against this steady development that we must now take a look at the war-torn Sweden, and Finland as its part.

Gustavus II Adolphus (1594-1632), son of Charles IX ascended the throne of Sweden at the age of 16 in 1611, inheriting three ongoing wars with Denmark, Poland and Russia. At the same time, Europe was about to enter an age of nigh endless warfare, starting with the Thirty Years' War (1618-1648), a war between the catholic and the protestant faiths, and one of the most destructive conflicts in human history. Fortunately, it turns out Gustav Adolphus liked to wage war, and he turned out to be rather good at it. This earned him the nickname, "the Lion of the North." However, this military success was not due to Gustav Adolphus' valour or ability as a military leader alone, but also due to his politico-economic reforms and modernization of the government. Reforms that he introduced to better finance and man the wars that Sweden was continuously fighting (Vahtola, 2003). Gustav Adolphus thus created the foundation on which the Swedish empire would be built.

These improvements included, new taxes and more efficient ways of collecting them, new towns where these could be applied to increased commerce, and a modernized government together with a new system of regional governance. This regional governance in turn naturally included the system of counties (*län; läänit*), and their governors. Among these numerous reforms was the parish registration of population, so that men all around the realm could be taxed and conscripted more efficiently. Due to this, many men from Finland were pressed into military service, and sent into foreign lands to fight. These men formed the infamous *Hakkapeliitta*-troops that seemed unstoppable on the field of battle. Ergo, after centuries of Swedish rule, Finland was slowly being charted and taxed more efficiently, thus making it a real part of the realm. The eastern border and the north remained mostly wild though, as the distances were too great for the logistics of the time to handle properly.

Great rulers rarely govern alone, and Gustav Adolph was no exception. He was assisted by Axel Oxenstierna (1583-1654), a statesman of brilliant ability. Many of the great achievements of Gustav Adolph would not have been possible without Axel Oxenstierna, as when Gustav was away fighting, Axel took care of the kingdom. He also prepared most of the reforms Gustav Adolphus would introduce. Both men were advocates of education, and more rights to the peasantry. In fact, it was Axel Oxenstierna himself who helped Gustav in acclaiming the throne despite his young age, and for reward, he was made Lord High Chancellor (*rikskansler*) of Sweden, a post he occupied for over four decades until his death at the age of 71. This contrast starkly with the untimely departure of Gustav Adolphus himself, who was killed in action in the battle of Lützen in 1632, at a young age of 37. Needless to say, the war raged on without Gustav Adolphus, with Axel Oxenstierna acting as the regent of the realm.

Gustav Adolphus' daughter, Christina of Sweden (1626-1689) was the rightful inheritor of the crown, but she was only 6 years of age. She would however grow up into one of the most educated and revolutionary queens of Europe, a great patron of arts, literature and education, interested in mathematics, philosophy and religion. She wore manly clothes, and liked to hunt and practise swordsmanship; a daughter truly in the image of her father. Perhaps that is why it was so scandalous when she decided to abandon the protestant faith as dark, grim and apocalyptic. Catholic church

interested her so much more, that ultimately in 1654 she relinquished the throne, sailed to Rome with 12 ships full of treasure pillaged by Gustav Adolphus from the Catholic Europe, and converted officially to the catholic faith.

The Finns are often portrayed as melancholic, dark and silent, especially in the traditional Finnish culture and arts. A large part of this tradition comes from the protestant faith, and it is exactly what queen Christina so despised. Mikael Agricola (1510-1557) is considered to be the father of written Finnish grammar, and he accomplished many remarkable things for Finnish language. However, at the time very few Finns could read or write, and thus most of his work was utilized by the clergy, to improve their education and their sermons. Mikael was also a close student of Martin Luther, and he assumed much of his thinking. The teachings of Mikael then found the Finns in churches, with tremendous efficiency through the sermons of the clergy itself. These teachings included several unfortunate and frankly harmful aspects: One, that the human body, and the human that inhibits it is dirty and sinful, that sexuality itself is sinful and that human is the centre of all sin; Two, that the world is about to end, and that the signs are everywhere, and that men and women should quietly submit and repent everything; And three, that the old pagan beliefs are still bewitching and misleading the Finns, and that women are unfit by nature (Hurme, 2017).

Furthermore, the increase in piousness had another effect as well. Through Christian teachings the class society was made eternal; the classes are born from god, and thus it is improper to upset this godly balance. If this sounds familiar, please remember what happened in Japan ruled by the *Tokugawa Bakufu*. Finally, Christianity was starting to take root in the eastern part of the realm, as the reforms instituted by Gustav Adolphus and Axel Oxenstierna chart the nation better and better, and the wars of faith place ever greater emphasis on religion. Especially on the coastline, a conversion from pagan beliefs to Lutheranism was strong in Finland in the 17th century. Ironically, it was during these times that the first university on Finnish soil, the Royal Academy of Turku, was founded in 1640, shortly after the death of Gustav Adolphus, and while Axel Oxenstierna was perhaps strongest in his political career. For reference, one sir Isaac Newton (1643-1727) was born only three years later.

One influential man who deserves a special note was the third General Governor of Finland, Per Brahe the Younger (1602-1680). Originally set on a military career, Per Brahe was an able man, and soon he managed to befriend Gustaf Adolphus for life. Soon after he retired from the military and, under Christina's rule, acted as the general governor of Finland first in 1637-1640, and again in 1648-1654. Per Brahe travelled Finland extensively to meet with the Finns, especially in the countryside, and to better understand the eastern part of the Swedish realm and its needs. He wholeheartedly wanted Finland to succeed, and seeing the sorry state of some of the Finnish towns gave him the information he needed to help them. Consequently, he was able to found many cities and institute many significant reforms, an efficient postal system being perhaps one of the most important. It was also under Per Brahe that the Royal Academy of Turku was established. In fact, the time that Per Brahe acted as the General Governor is referred to as the "Time of the Count" (*Kreivinaika*), and it is synonymous with good and prosperous times.

The political back-and-forth continued for the next one and a half centuries. Ultimately, this has much less effect to our story of urbanism and cultural evolution, so let us not spend any more time with the Swedish royal politics than is necessary. In her admiration of the catholic faith, Christina decided to never marry, and as she relinquished the crown, her cousin, a sororal nephew to Gustav Adolphus, Charles X Gustav (1622-1660) ascended to the throne in 1654, only to die six years after, and so it goes on. Charles X liked to fight as well, and at the time of his death, Sweden was engaged in war with 6 other nations. His son, Charles XI (1655-1697) ascends to the throne in 1660, at the tender age of 4. These two were autocrats and started to shift the power from the nobility back to the king. Towards

the end of Charles XI's reign, multiple bad years hit the North in succession, causing terrible famine, especially in Finland where almost every third Finn died.

Then came the infamous warrior king, Charles XII (1682-1718), who ascended the throne in 1697 at the age 15. Trying to take advantage of the political chaos and the inexperienced king, a threefold alliance of Denmark-Norway, Saxony-Poland-Lithuania and the Tsardom of Russia attacked Sweden simultaneously. This was the beginning of the Great Northern war (1700-1721) that would devastate the Swedish empire. Against terrible odds, Charles XII managed to defeat the alliance on every front in the beginning time and time again, leading him to believe himself the chosen one. This quickly lead to some terrible military decisions, which ultimately saw the most efficient and modern army of Europe quickly routed and destroyed in the frozen wastelands of Russia, with the last few remnants of the defeated army driven all the way to Turkey.

One of Peter the Great of Russia's (1672-1725) greatest dreams, something that he had always wanted, was an access to the Baltic sea, and he had finally achieved it. Now he needed to secure the newly founded city of St Petersburg. Peter wasted no time in utilizing this chance of the Swedish kingdom without a king, and instantly occupied Finland in what is called the *"Great Hatred"* (*Isoviha*), that lasted from 1714 to 1721. During this time, Finland was ransacked in a terrible manner, churches looted, villages razed to the ground, people slain and enslaved, with no end in sight. Finally, with the treaty of Nystad in 1721, Finland was returned to the Swedes, the Finnish economy and population in ruins. This, without a doubt left a deep hatred towards the Russians in the Finnish ethos. When peace was signed for, portions of Finland were ceded to Russia, and among these, the city of Vyborg, the second largest city in Finland.

In the meantime, Charles XII finally managed to return to Sweden, only to try invading Norway this time. In 1718 he was shot in the head during the siege of Fredriksten while inspecting the siege at night. It is unclear whether he was shot by the enemy, or by one of his own. Nevertheless, the young king had left no offspring, and it was his sister, Ulrika Eleonora (1688-1741) who next took the crown in 1718. Quickly, in 1720 she however relinquished the crown to her husband, Fredrik I (1676-1751) of Sweden. After the fiasco of Charles XII's campaigns, Sweden had had enough of autocrats, and the power of the King was diminished. Consequently, two parties formed, the "Hats" and the "Caps." Hats wanted to restore the great Swedish Empire, while the Caps wanted to maintain a more peaceful and cautious foreign policy. Hats won, a war was declared on Russia, and Finland was badly scourged again from 1741-1743 in what was called the *"Small Hatred"* (*Pikkuviha*), ever deepening the wounds in the Finnish extelligence.

After winning the war, Russia wanted their own king on the seat, and a German man, Adolf Frederik (1710-1771) ascended the throne in 1751, and held it until his death in 1771. While he was basically chosen by the Russians, he later also became an advocate of the Hats. Nevertheless, he had very little real power. As large parts of Finland had been ceded to Russia, new fortresses were needed, and the building of Viaborg (*Suomenlinna*) was started off the coast of Helsinki. It was to be the most modern naval fortress of its time. Adolf Fredrik did also visit Finland, the first visit by the king in 120 years.

Next, his son Gustaf III of Sweden (1746-1792) takes the throne in 1771. Gustav III was an avid admirer of the French style of the time, and a certain style in Sweden and Finland was born. This style is named after Gustaf III as "Gustavinian style" (*Gustaviansk stil; Kustavilainen tyyli*). He was also a headstrong and determined king, an enlightened autocrat, and he once again shifted the power from the quarrelling estates back to the king. He also declared war on Russia, but this time, after quite some fighting, the borders stayed the same. Due to his autocrat ways, Gustaf III made many enemies, and was ultimately assassinated in 1792.

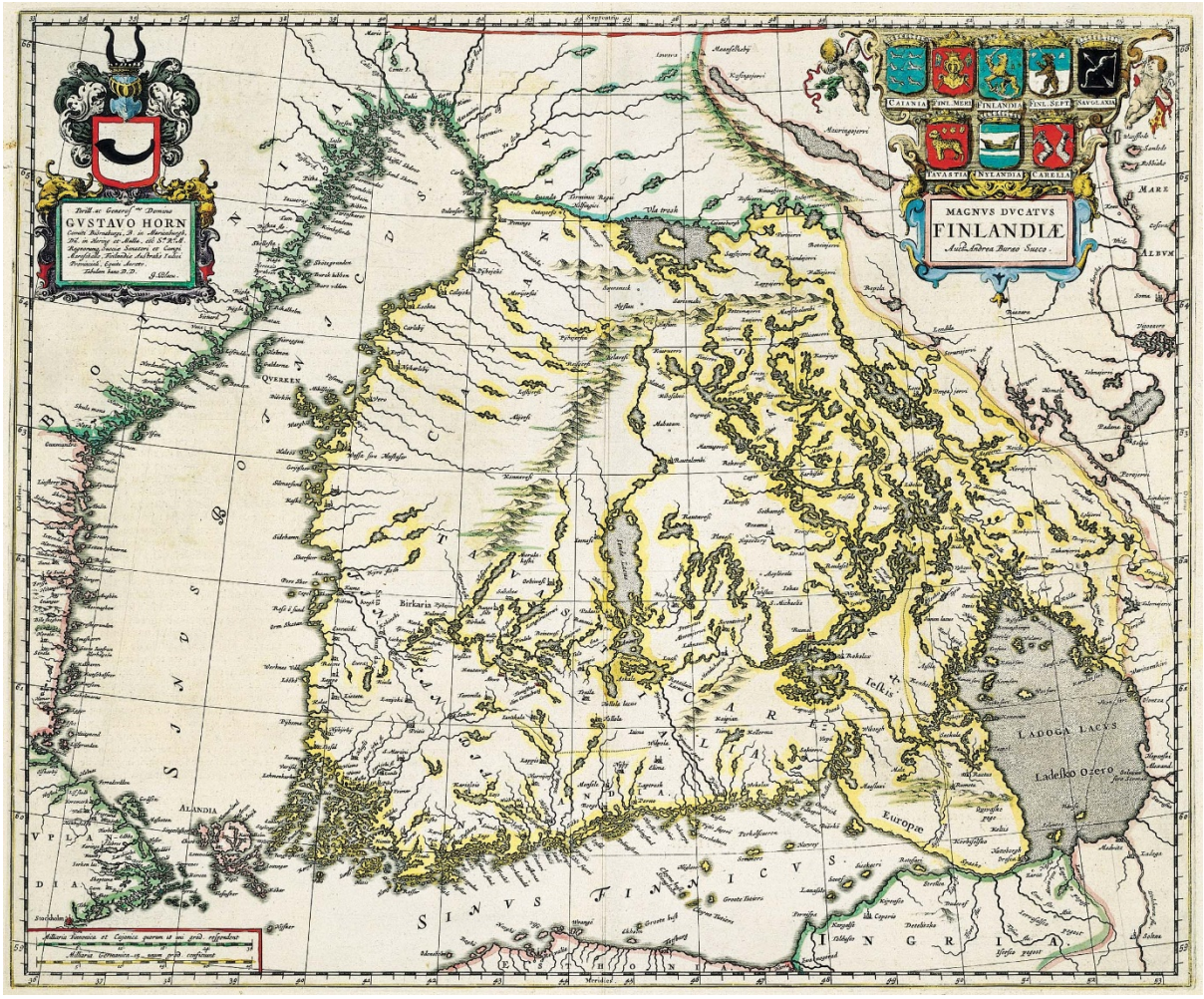
The Edo-period in Finland came to an end with Gustaf III's eldest son, Gustav IV Adolphus (1778-1837). He ascended to the throne in 1792. Simultaneously in Europe, the great Napoléon Bonaparte (1769-1821) was in the middle of his renowned conquests, the Napoleonic wars. Napoléon allied himself with Russia, and Russia invaded Finland in 1808. Gustav IV turned out to be a sorry excuse of a military ruler, and consequently, The Finnish War (*Suomen sota*) was one of the lousiest wars ever fought by the Swedish. It ended in utter defeat in 1809, Finland was permanently ceded to the Russian Empire, and Gustav IV Adolphus was effectively fired by the Riksdag. Thus, the mighty had fallen, and the Edo-period, or more accurately, what it represented to Finland, came to a close.

The reader might at this point find it odd that while all the Swedish monarchs have been presented, there is no talk of their Japanese counterparts, the *Tokugawa shoguns*, or their endeavours. However, for the entire period, Japan was Japan, with no new lands added, and none lost. The *shoguns* had to tackle many exceedingly difficult politico-economic problems, as well as many disputes between their subjects, but *never* did they need to handle international relations. What makes the Japan of Edo-period so special, and so unique, is the complete and utter isolation, and that is exactly what the Swedish empire so well contrasts to. Especially the border parts of the realm, Finland among them, are completely at the mercy of whoever happened to be the king or queen at the time, *and* whoever happened to rule next door. The reason the Swedish kings are presented one by one, even though they carry little meaning in terms of urbanization after Christina, is that each had a specific and unique manner of dealing with the surrounding powers. Ergo, the great divide between Japan and Finland is that Fennoscandia, along with the rest of Europe, is at constant turmoil, with borders changing every decade, kings coming and going. Japan in turn was ruled neatly by one strong autocrat after another, unrestricted, and often unquestioned. Under such a steady line of succession in a country with practically zero international relations, it is unnecessary to point out who instituted what reforms, only that they were instituted by the *Tokugawa Bakufu*, led by the long succession of *Tokugawa shoguns*.

Unprecedented Urbanization

It is the 17th century that we are mainly interested in, because it is during this time that we see unprecedented urbanization in both nations. Much happened in the following centuries as well, but curiously enough, most of the novel urbanisation took place in the first century of the period, in Japan and Finland alike. It is during this time that the urban traditions of both nations were forged, traditions that will hold strong for centuries to come.

Gustav II Adolphus, the "Lion of the North," needed money and men to finance his wars, and he acted mainly towards that end. His economic policy was that of mercantilism, and together with Axel Oxenstierna, they wanted to build stronger central government, which required a clear-cut hierarchy in the realm. The result was the new system of counties, which in turn emphasized towns. Furthermore, the towns would now have different statuses; some would become regional capitals with the regional governor and magistrate residing in the town, while others were but small assemblies of merchants without rights to trade with anyone else other than the local peasants and bigger cities. Consequently, when Gustav Adolph assumed power in 1611, there were 11 towns or cities with privileges, and in the 1660's, shortly after Christina relinquished the crown, this number had tripled to 33 (Lilius, 2014b). Some did not survive for long, but then again, there were also plans for even more cities that were never realized in the first place.



Grand Duchy of Finland in 1662 from Joan Blaeu's Atlas Major (Wikimedia Commons)

In similar fashion, as the first *Tokugawa Shogun* Tokugawa Ieyasu was setting up his system of social and administrative control over the land, he decreed the *Genna*-edict (元和令), which included the *"One Domain, One Castle"* -policy. This policy meant that each province or domain would have to abandon all the scattered small garrisons in tactical locations, and concentrate all of its military and bureaucratic functions to one castle alone. This edict forced numerous provinces to abandon their previous capitals, for any one of the scattered small castles of the time would hardly have sufficed alone anymore. The new sites were chosen carefully, combining agriculture, flow of people, merchandise and information in a central position within the domain. A powerful testament to the great care and thought that was put into choosing the new sites is the continued growth and success of many of these castle-towns until the present day (Sorensen, 2002).

Another important element of the Edo-period urbanization is the *sankin kōtai* (参勤交代) system. Tokugawa had, depending on whether they had fought on his side, or against him in the *Battle of Sekigahara*, redistributed the domains, and thus divided the daimyo to two groups; the *fudai daimyo* (譜代大名), or the "inner *daimyo*" who had their domains closer to Edo, and the *tozama daimyo* (外様大名), or "outside *daimyo*" who had their domains further away from Edo. Also part of Tokugawa's plan of social and administrative control over the land, *sankin kōtai* required all *daimyo* to have a residence, to have their families live in these residences, and for the *daimyo* themselves to reside in Edo either every other or every third year, depending on their status. As it was improper for a *daimyo* to live or travel inconspicuously, this system kept the daimyo poor, and created many highly profitable

shukubamachi (宿場町, meaning roughly ”Inn Town”) along the major highways, where the retinues could stop and rest. For example, for the Maeda (前田) *daimyo*s, it is estimated that the mansions in Edo, together with the upkeep of the 3000 people in them, cost between a third and a half of the entire income of their domain (Sorensen, 2002)! Needless to say, this made Edo dwarf all other cities in Japan, economically, politically, and in size.

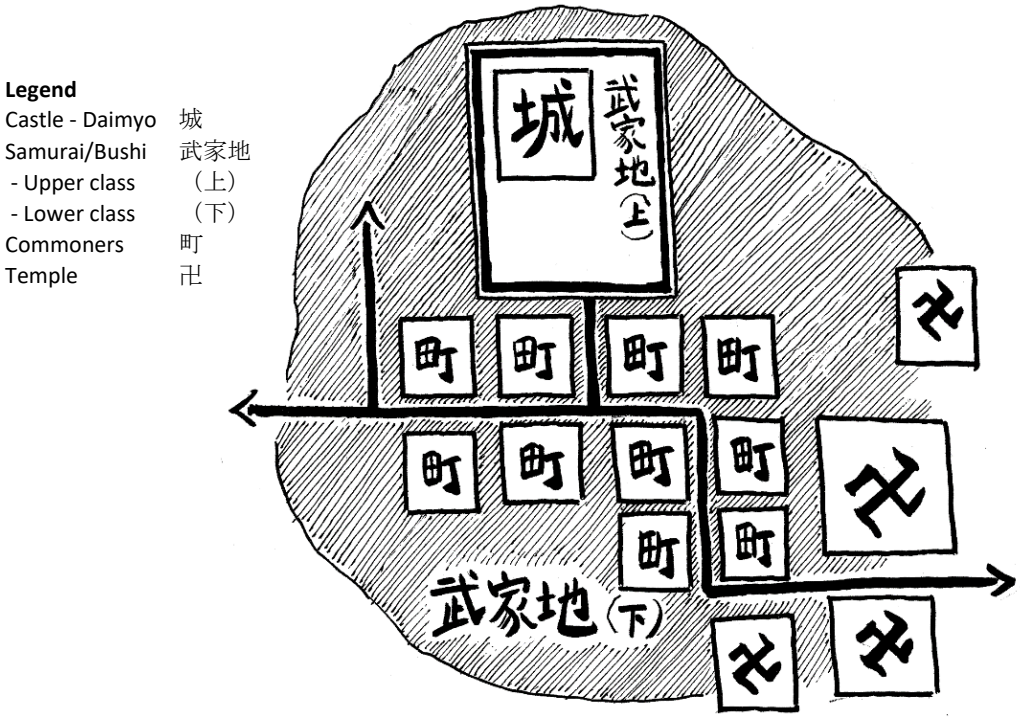
Finnish towns did not fare equally well. While hopes were high, in reality commerce did not start quite as well as had been hoped for, and especially many landlocked towns withered badly after the initial start, some so badly that they lost their privileges entirely (Lilius, 2014b). Especially the uncountable deaths at the turn of the 18th century, as well as the ransacking during the *Great*- and *Small Hatreds*, certainly left their impression in the freshly based cities. It is worth remembering, that Finnish towns usually numbered their inhabitants in hundreds, not in tens of thousands like the Japanese castle towns did. The drastic difference between the demographics of Edo-period Japan and Finland must not be forgotten.

While the population estimates of the early Edo-period Japan are guesswork at best, it is estimated that in the beginning of the 17th century, about 1,4 million lived in the cities, and at the end, the number had climbed to about 5 million. If the popular guess about the population of Japan being roughly 12-15 million at beginning of the century is correct, then this would mean an increase of urban population from about 10% to about 17%. This is not a small number in a preindustrial nation, and it completely overlooks the fact that over a hundred of the biggest cities of 17th century Japan were built from scratch in less than 100 years. The castle-town was not the only type of settlement in Edo-period Japan by any means, but we shall skip the smaller villages and towns because the urban traditions of coming ages were made in the new, big and central castle-towns, and only imitated afterwards in the countryside.

On the other hand, the Finnish population was little over 300 000 towards the end of the 16th century, and a powerful testament to the effectiveness of Gustav Adolphus’ reforms is the fact that by the middle of 17th century, the population had grown by one half, up to roughly 450 000. By the end of the 17th century, Turku had around 4000 residents, Vyborg was the only other city with more than 1000 residents, and the rest had between 200-500 inhabitants. A common estimate is that around 10 000 Finns lived in cities, meaning about 3% of the population (Lilius, 2014b). However, the famine years left Finland with almost every third Finn dead, meaning that by the end of the century, the Finnish population had again dropped far below 400 000. Even as a portion of the population, Finland does not come even close to the level of urbanization that was achieved in Japan. Finns were, true to their nature, effectively still living in the forests and in the countryside.

Nevertheless, it was during this time of frantic founding of cities that the Finnish urban traditions were made. Even before the 17th century, Finnish cities *did* already engage in detail planning, but that was largely planning made because of necessity, not because of holistic vision of urban settlements (Niukkanen, Seppänen, Suhonen, 2014). The urban structure was thus very organic, dictated by terrain and practicality. During the 17th century however, the newly founded cities usually had a readymade gridiron plan, and the uniform image of towns became an issue. Even though many of the plans did not work nearly as well as the new towns of Japan did, the ideology of the gridiron wooden town of Finland was forged (Lilius, 2014b). This ideology was rooted so well in fact, that in the coming centuries no really new ideas towards the urban structure would emerge; the gridiron would be adapted to all problems.

Likewise, the Japanese castle town that was developed during the 17th century would shape Japanese urbanism for centuries to come, and it is arguably still exerting its powerful influence in modern day Japan. It is now time to take a look at the towns themselves:



Japanese castle towns in Edo-period, redrawn from (Sorensen, 2002) by the author, p. 24 (see text)

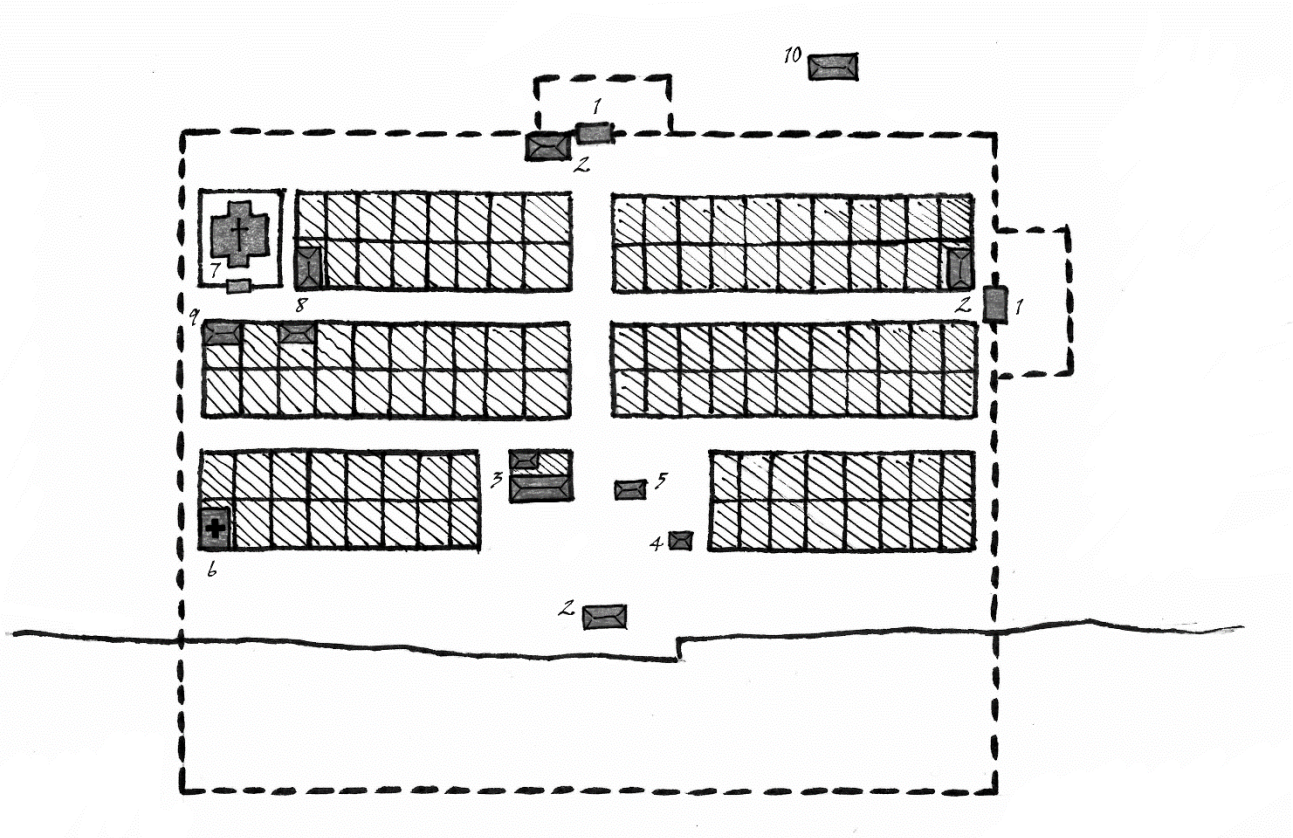
The Town

The above diagram is an adaptation of Sorensen's simplified structure of a castle town. This diagram evolves with the book, and the rest of the diagrams are also adapted in this thesis accordingly, one for each age until post-war Showa-period. The *Daimyo* would live in the castle with his closets retainers, advisors and warriors. Before the gates would be the commoner's quarters, tightly and neatly built regular blocks called *machi* (町; meaning town, village). Surrounding these were the lower-class *samurai* residences, which in turn were loosely built, and rather irregular in shape and size as well as road layout. Surrounding the city on the outside were numerous temples that were usually built on top of hills with a modest commercial district in front of the front gates. (Sorensen, 2002)

The first thing that should strike the eye of an observer is that the castle is not the centre of the town. In fact, there is no well-defined centre at all. In Europe, under the guidance and leadership of the merchant class, the cities developed into powerful independent political entities in themselves. Thus, the walls were there to protect the whole city from attacks by any party, including the governing nobility's own raids (Ushio, 2005). The early Japan had some similar examples of independent cities, most notably Sakai (堺), that later developed into modern-day Osaka (大阪), which had a thriving and relatively powerful community of merchants instead of a singular warlord. Regrettably however, all of these perished in the flames of war right before Edo-period proper. Since the castle-towns were completely new at the time, and their main purpose was to host all of the bureaucratic and military functions of the domain, they were made with a completely different purpose in mind. It was the city, especially the confusing and irregular lower-class *samurai* quarters, that were there to protect the castle, not the other way around.

Instead of the castle, the abstract centre of the Japanese castle towns were the tightly and closely built commoner's quarters, the economic hub of the city. While the commoner's quarters were placed directly in front of the castle in Sorensen's diagram, Shelton argues that the castle was more remote, and in fact a sort of "white space" on the map, as only a select few were ever allowed to approach the castle (Shelton, 2012). For normal people, the lower-class *samurai* included, the castle grounds were completely unapproachable, unpassable and unusable. In addition, the merchants, while regarded as the lowest of the four castes, were doing the vital work of buying countryside products, food, cloth, raw-materials, etc. and bringing them in to cities. Thus, it stands to reason that busiest shopping streets would be along the busiest ways in and out of city. The castle in turn benefitted from being hard to approach in terms of defence, and thus was almost naturally located away from the obvious centre.

Another interesting aspect of Japanese cities, although Sorensen's diagram does not show it, is the complete lack of market squares. First, there were no obvious place to put them, as the castles were deliberately placed in non-obvious locations, and the commoners' quarters in turn were far too crowded for big empty plazas. Second, In the eyes of the *samurai*, marketplaces would have constituted dangerous gathering places for the commoners, and were thus strictly kept out of the cityscape. As mentioned above, the *Tokugawa Bakufu* along with the *daimyo* kept a Machiavellian leash on the commoners, making sure there were no chances for them to rebel in any way. In fact, the commoner's quarters were kept under close watch at all times, with gates at each crossroads between blocks. Passing from one block to another after sunset often required a written permission that needed to be shown to the guards. To rephrase the earlier statement, instead of the castle protecting the city, the whole structure of the city was there to contain and control the commoners.



An ideal Finnish new-town towards the end of 17th century;
adapted from (Lilius, 2014b), p. 235, redrawn by the author (see text)

The above diagram is adapted from an illustration of an 'ideal' structure of a Finnish town during the Swedish empire by Henrik Lilius (Lilius, 2014b; p. 235). Even where there were castles, they were not the at the centre of cities in Finland either. However, the town square, the marketplace constituted the centre of the town. It was for mercantile purposes that most towns were founded, with city privileges granted by the king. Depending on the size and status of the town, it would include some, none, or all of the significant buildings listed above. As times passed, the counties also changed often, and the status of regional capital was often transferred from one town to the next, thus acting as a sort-of natural promotor of urbanization. Bigger cities like Turku would obviously host some in multiples, as well as other types of important buildings like the university. Unlike in Japan, commerce was the very purpose of urban areas of the time, and thus most of the farmers brought their produce to the market by themselves, where the merchants would buy it, and then transport it onwards. In fact, in 1638 it was decreed that farmers were prohibited from selling their produce to familiar merchants beforehand, and instead had to bring it to market for all merchants to inspect and bid on (Lilius, 2014b).

The ideal structure was as follows: The town would be fenced all around to account for all the produce that came and went to and from the town. Remember that while Edo-period Japan did not tax any consumer goods, Sweden was the polar opposite. Land was also taxed in Sweden, but it was the taxing of commerce that brought the bulk of income to the king. Commerce would be checked before arrival or departure through the gates [1] in customs houses [2]. Around the market square, there would be the town hall [3], along with a possible jail. Town mill [4], storehouse and the measuring hall [5] should also be located near the square. If the town had a harbour, a customs house [2] would also be located near the square. Hospital [6] on the other hand was as far away from the square as possible, near the border of the town. Church [7] and the houses of the clergy [8] would also be located towards the border. Because clergy took care of the education as well as health, school [9] was to be located next to the church. Finally, the local brewery [10] should be right next to the town, but outside the fence.

It is interesting to note that both nations favoured greatly wooden 2-story urban fabric. Neither in Finland, nor in Japan, did many buildings rise above this limit, castles, churches and temples being the natural exceptions. Both nations also make clear distinction between the public streetscape, and the private home and garden. In Finland, the urban image is also starting to regularize, as the streetscape is built to uniform and closed outlook. Buildings are built flank-to-flank, high fences covering the gaps in-between, and with windows just above eye-level. Owners of empty plots were even issued orders to build within few years, lest fines be levied (Lilius, 2014b).

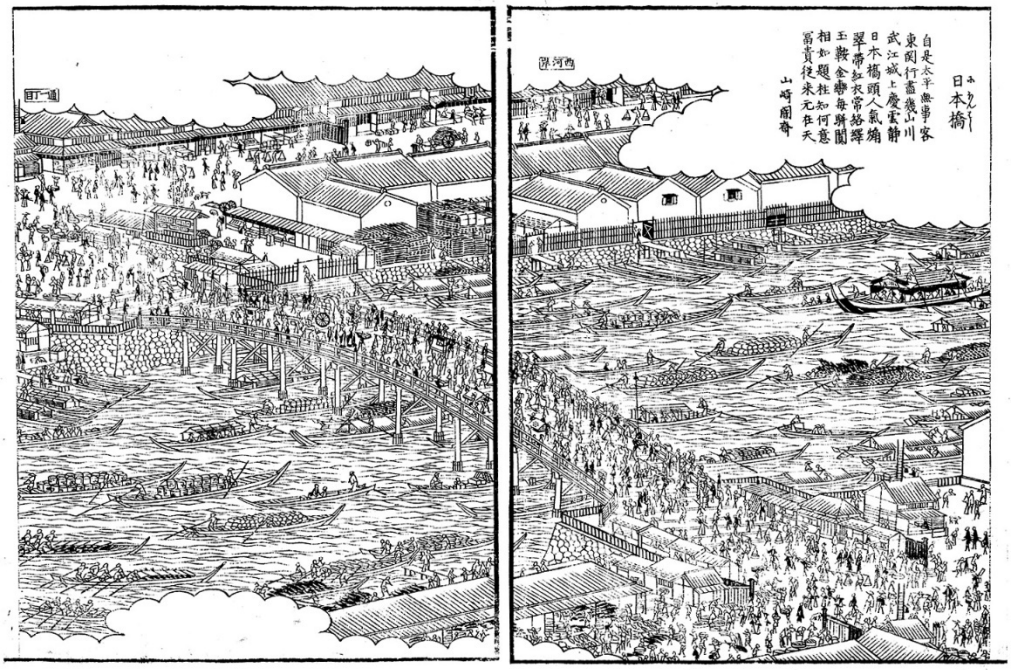
In Japan, this typology responds roughly to the irregular *samurai* quarters, although the base plans were completely different. The streetscape in the commoner's quarters however was hardly regulated at all. While the buildings were roughly of uniform, wooden style, the additional commercial

""Panorama of Yedo from Atagoyama," a colored photochrom showcasing daimyo residences, original photo by Felice Beato in 1867 or 1868 (Wikimedia Commons)

structures, such as huge signs on roofs were as varied, colourful and chaotic as ever (Shelton, 2012). These means of attracting potential customer attention were not limited to visual stimulation either, but instead all manner of bells, chimes, rattles, windmills and such gave the streetscape their extremely vivid character. Furthermore, while the buildings were boarded up during the night in a manner fit for abandoned houses and towns, during the day the wares were brought out in a fashion that took almost half of the street space in front of each shop.

Neither in the big cities of Japan, and the small towns of Finland, there were no parks. Finland did not need them, for the forest was an ever-present element of life. In Japan on the other hand, parks would also have constituted unnecessary gathering places for commoners and were thus actively prohibited as well. Even when spaces did open up, they were quickly built again, as will soon become apparent. Instead, the numerous Temple grounds, festivals and bridges took care of this need. Because temples undertook many important duties, such as taking care of the dead, they often had rather large areas dedicated to them, and these were often well managed green spaces. And, as human nature would have it, where people frequent, the merchants follow. Consequently, almost all temples had a decent commercial district of amusement and entertainment in front of them (Sorensen, 2002).

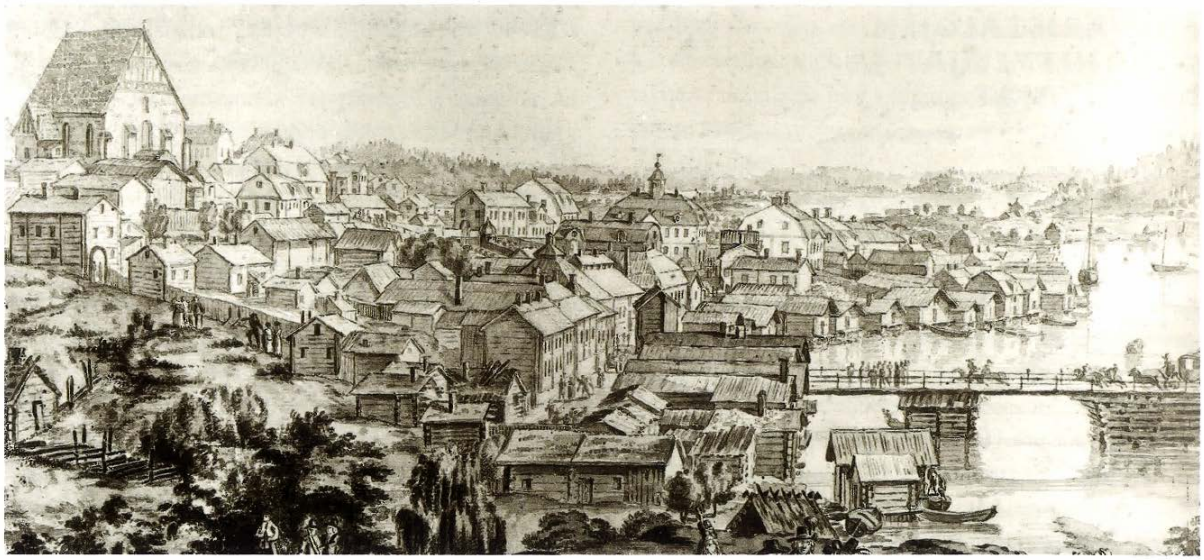
Both nations had quite poor roads, and different ways of handling the heavy cargo. In Finland, winter was the answer, as frozen routes would allow relatively easy passage for a good sled, even with remarkably heavy cargo. Especially lumber and other heavy goods would always be harvested and transported during the winter, and left drying in storehouses for trade or use in the summer. In the huge cities of Japan, water was a big necessity and saviour rolled into one. Waterways and canals ran through most Japanese cities, especially Edo, and many activities would naturally flock close to these highways of logistics. Especially the enormous bridges became an important gathering place for urban people without squares nor parks. Since the only way to construct the huge, long bridges was a strongly arched structure, the view from the top of a bridge must have been stunning, as the whole enormous 2-story city was spread before one's eyes. Also, since people needed to cross these bridges daily, the best way to inform the citizens was via large information boards on both ends of bridges (Shelton, 2005). Finally, since the transportation goods was utilizing the below waterways already, it again made perfect sense that commercial stalls would appear close by as well.



江戸名所図絵；日本橋（*Nihonbashi*）； Saito, Yukio & Hasegawa, Settan, 1834-36 [1893]

"The spatial structure of Edo in 1859," adapted from (Sorensen, 2002)

Naturally, there were a number of problems, the first being the fact that cities grow, and Edo-period was a time of great urbanisation. In Japan, the commoner's quarters were incredibly tightly packed to begin with, so any growth in population would require more space, which just was not there as the lower *samurai* quarters tightly flanked the commoner blocks, the *machi*, on all sides. Occasionally some of the *samurai* quarters were converted into enlargements of the commoner's quarters, but much more often a completely new commoner's area came into being by either a new settlement at the edge of the city, or a pre-existing village being engulfed by the growing city (Sorensen, 2002). Especially the image above shows this. Note the highly dispersed districts; commoner's quarters, temple grounds, daimyo mansions and *samurai* dwellings as well as plain agricultural land are intermixed in a patchwork fashion that follows no rules other than those set by the terrain.



Ink wash painting of Porvoo by F.A. von Nurmes in 1789, adapted from (Lilius 2014b); digitally remastered by the author.

While Finland did not wrestle too much with this problem during the 17th century, it would rear its head in Finland as well in the 19th century, as more and more people flock to cities that no longer have the means to plan their expansion quickly enough. However, this is a matter for the next chapter. Instead, there was another major urban scourge as well, and this one was common to both nations alike; Fire.

Especially in Edo, these even received the nickname "the Flowers of Edo," (江戸の華; *Edo-no-hana*) and the wooden houses became known as *yakeya* (焼け屋)*,* literally "burning buildings." Especially the tightly packed commoner's quarters were prime subjects to spreading fires, and Edo is known to have been rebuilt countless of times. It is revealing that even though a simple requirement in the building code (such as fireproof roof-tiling) would have mitigated this problem significantly, no such efforts were taken by the government, or any of the local authorities, neither *samurai* nor commoner. This is rather mystifying, and the reasons are likely multi-layered ones. For example, the cycle of death and rebirth was an important religious concept in Japan, and could well have mentally prepared the population for such wanton destruction (Shelton, 2012). Alternatively, the closed-circle economy of the Edo-period cities could have benefited greatly from the constant rebuilding. Koichi in turn points out that carpenters and builders were regarded as an important part of the military (Koichi, 2005), and thus it would stand to reason that they would need as much practise as possible. Whatever the reason, it is clear that not much effort was done to restrict the fires in terms of building regulations.

Finland was no different. Already in the medieval period, fires were mentioned as the single most destructive scourge of urban areas. Finns and Japanese alike were to find out by painful experience that the closer wooden buildings were built, the more efficiently the fire spread. Numerous times brick- and stone buildings were recommended to Finnish towns and cities as efficient means to prevent the destructive fires, and time and again the message fell to deaf ears. The need to constantly repeat an almost self-evident message is a resounding testament to how well it was received (Hall, 1991). Even as late as 1842 there were 6651 urban houses made out of wood, and only 208 made out of brick, of which 180 were to be found in one city, Vyborg (Hall, 1991). The size of the urban settlements in Finland is probably one of the reasons why no real action was taken towards preventing fires via building code. Instead, although money was never offered upfront to help in the rebuilding, tax reliefs were issued to people who had suffered from a fire (Lilius, 2014b). The fires also gave numerous chances for rebuilding and re-planning the cities.

Neither in Finland, nor in Japan would the issue be solved before the Meiji-period. In Japan, firebreaks were used from time to time, especially after a particularly fierce fire had destroyed a whole district. However, even this measure was largely inefficient in controlling fires, mostly because it was not thoroughly followed through. Especially telling example comes from early Edo. After the *Meireki*-fire (明暦の大火) in 1657, the government decided to dedicate an area directly south of the *Edobashi*-bridge (江戸橋; literally meaning, "the Bridge of Edo") as a firebreak, as well as an emergency shelter area. The land was confiscated, the earlier landowners were given substitute plots from elsewhere, and a strict order was given that the area should remain unbuilt. Nevertheless, in reality the area was slowly built up. First came the lightweight temporary structures, such as tents and stalls, followed by more lasting structures, such as archery ranges, followed by lasting structures. In the end the whole area was completely built up by merchant housing, stables, teahouses, commercial stalls and warehouses. (Sorensen, 2002; quoting Jinnai, 1990)

The above example is not only telling of the attitude towards the fires, but also of the urban traditions and administration. While the *samurai* did indeed have an iron grip over politics both big and small, in terms of urbanism and spatial control, certain give-and-take was always present (Sorensen, 2002). No matter how high and mighty some select few may be, society is always an amalgam of all of its parts. Even in Edo-period Japan, with the *samurai* in hold of power as firmly as imaginable, the non-*samurai* had some say in more indirect sides of politics. Nevertheless, the age is characterized by terrible oppression.

We are at the end of this period, and thus of this chapter. Although this has already been mentioned above, it is a point so important that it deserves repetition: It goes without saying that 18th century was not idle time in the cities, but it was a time of refining the urban culture instead of the furious urbanization that took place during the 17th century. We shall cover some of the events of the 18th century in the next chapter, but frankly speaking, the urban traditions that are at the core of this study have now been forged. The refinement can be seen clearly in the age to come, and thus the latter part of this period has been omitted from this thesis.

We shall now close this long chapter with a curious detail. Although Japan was practically closed for all foreigners except for Netherlands in Nagasaki, a Finnish man by the name of Adam Laxmann, a lieutenant in the Imperial Russian army was sent to Japan in the late 18th century by the order of Catherine the Great (1729-1796) to lay foundations for future trade with the enigmatic and closed off Japan. Against all odds, he was granted a short access to Japan, and he even accomplished the first international trade agreement with Japan that was not with Netherlands. Unfortunately however, this agreement was not followed by trade immediately, and it fell apart when trading was finally supposed to start.

Meiji (1868-1912) & the Grand Duchy of Finland (1809-1917)

The year was 1809. Japan was still peacefully in the later stages of Edo-period, but Finland was faced with a new, completely unprecedented situation; In the aftermath of the catastrophic Finnish War, Russians have conquered Finland again, only this time they have no intention of leaving. Heroic efforts by lieutenant general Georg Carl von Döbeln (1758-1820) stop the Russians from invading Stockholm over the frozen Baltic sea, but alas, half a year later peace was finally signed. One of the terms was that the whole of Finland was to be ceded to the Russian empire, and Sweden agreed to this. A union of more than 700 years came to an end, and an unknown future under a new ruler waited. It is perhaps General von Döbeln himself who expressed the prevailing feelings the best in his farewell speech to his troops:

"[…] But, Finland is separated from Sweden. – Torneo river now draws the border of the realm! – Finns! With this peace, a third of the Swedish crown's lands are lost – Sweden loses the proud Finnish nation, its strongest support, – moreover, the Swedish army loses its core and the most significant part of its military might; – The motherland is crushed, drowned in sorrow and languish over the irreplaceable sacrifices, but the wise Almighty has decreed our fate, and it must be endured with patience – with acquiescence.

[…]

Swedes! Be proud for having seen these Finnish remnants! Remember them! – Revere them! – See their withered bodies, their bleak faces, bearing marks of their faithful, albeit fruitless efforts in the years past! And you Finns! Convey the gratitude of the Swedish people to your nation in your homeland! Know that, though you return with threadbare clothes – with pierced and severed limbs, you also carry the unmistakeable token of an honourable warrior soul.

You could never be enemies of the Swedish motherland – of that I am convinced – but remain forever its friends! Should the overrule of your new lords impede the realization of your will and wishes, let the quiet voice of your hearts and minds send blessings to your motherland! Remind your children of this! Teach this from family to family, bless you, praise you. […]

[…]

Finns! Brothers! If only my words could be accompanied with tears of blood from my eyes, they would certainly flow, and each drop would be a testament of my reverence, my friendship!"

Georg Carl von Döbeln in Umeå, 1809 (translated by Jonatan Lehtonen)

"[…] Men, Finland frångår Sverige. – Riksgräntsen är Torneå Elf! – Finnar! vid denna fred, förloras Tredjedelen af Svenska kronans område – Sverige förlorar den stolta Finska Nation, sitt kraftigaste stöd, – ej nog därmed, Svenska Arméen förlorar Kjernan och betydligaste delen af dess Krigsmagt; – Moderlandet är Krossat, försänckt i sorg och saknad öfver oersätteliga upoffringar, men den Visa allmagten har beslutat våra Öden, de måste emottagas med Tålamod – med Undergifvenhet.

[…]

Svenskar! Varen Stålte öfver, at hafva sedt desse Finska Qvarlefvor! Minnes dem! – Högakten dem! – Se deras aftynade Kroppar, deras bleka ansigten, de bära Vedermälen af deras trogna, änskönt frugtlöse bemödander förflutne År! Och Nj Finnar! När nj återkommen til Fosterbygden, så framfören Svenska Folckets tacksamhet, til Er Nation! Weten, att J återvänden med utslitne Kläder – Afstympade, eller genomskutne lemmar, men i medfören en rättskaffens Krigsmanna Själs Synbara prydnad.

Fiender til Svenska Moderlandet Kunnen I aldrig blifva – derom är jag förvissad – men förblifven allan tid dess Vänner! skulle det nya Herraväldets magt hindra, önskans och Er viljas utöfning, så låt med hjertats och Tanckars tysta språk, välsignelser tildelas Moderlandet! Påmin Edra barn derom; WJ skola från slägte til slägte, välsigna Er, högackta Er. […]

[…]

Finnar! Bröder! Kunde mina ord beseglas med blods tårar från mine ögon, skulle de strömma, och hvarje droppa försäkra Er min Vördnad, min vänskap!"

How powerful his words! However, as it turns out they are somewhat undermined by the fact, that already in 1808, in the very middle of the war, legislation for the Grand Duchy of Finland was already being prepared. Representatives of the estates had already met with the Tsar Alexander I (1777-1825), sworn allegiance to him, and been informed of a coming assembly of the estates. While the war was still going on, although practically already won, Alexander decreed the *Diet of Porvoo* to convene in the old tradition of the *Riksdag of the Estates* in March of 1809, meaning that the peasants would still be represented. After the estates had sworn allegiance to the Tsar, Alexander in turn promised that Finland would maintain its own laws, languages, culture, faith and privileges. Finland would *not* be annexed to Empire of Russia proper, but instead it would become an autonomous Grand Duchy of Finland, and finally be raised to be a nation among others. After the initial grandeur, the Diet convened until June of 1809, when the Tsar returned to close the assembly.

Although the term "Finland" has been used extensively in this thesis up until this moment, this very moment was the birth of that name (Vahtola, 2003). Before the *Diet of Porvoo* there was no Finland, only Finns in an Eastern part of the Realm known as the *"Österlandet,"* meaning roughly "the Eastern lands." Alexander I even went as far as to name the highest governing body of Finland as the Senate of Finland in 1816 to highlight the equal status it held to the Senate of Russia. The senate acted as the supreme court and the cabinet, and while it was officially headed by the Russian Governor-General, its members *had* to be Finnish citizens, and it did not convene in Russian (Vahtola, 2003)! It is no understatement to say that *the Diet of Porvoo* is the true birth of Finland, and a true turning point for the Finnish people. Even Vyborg, that was lost to Russia in 1710, was attached to the newfound Grand Duchy, and thus was part of Finland once again. Curiously, it would take almost 50 years for the Diet to convene again, which it did in 1863, when it was called upon by the Tsar Alexander II (1818-1881) after the Crimean War (1853-1856).

Tsar Alexander I opening the Diet of Porvoo 1809, by Emanuel Thelning in 1812 (Wikimedia Commons)

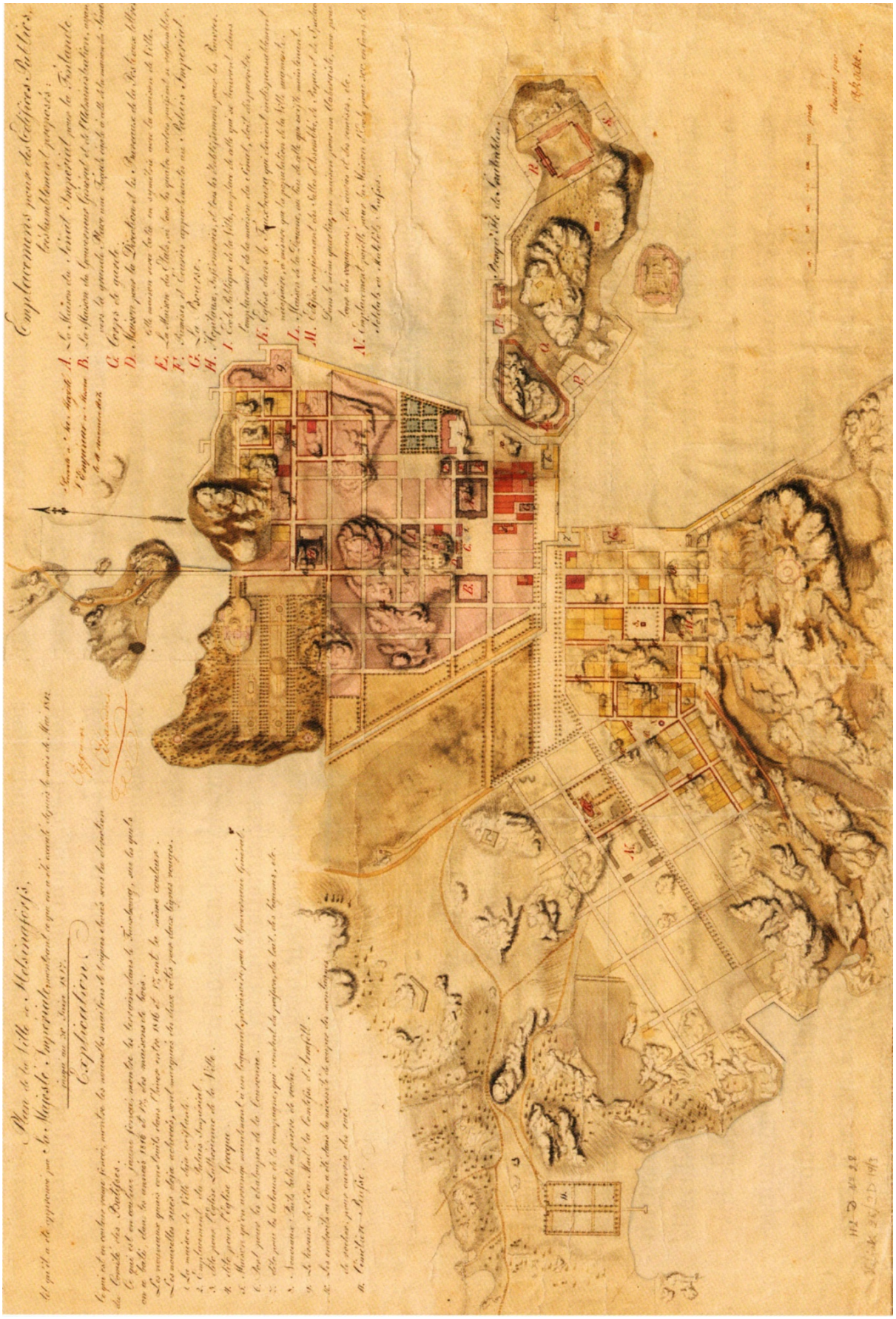
One crucial thing had now changed for Finland. When Finland was part of Sweden, it acted as a buffer zone towards the daunting Empire of Russia. *Österlandet* was without a doubt an important part of the Swedish realm, as the actions of multiple kings and officials, such as Gustaf Vasa, John III, Gustav Adolphus, Axel Oxenstierna, Per Brahe Younger and general Döbeln well prove. Nevertheless, Finland was the remote part, the part that extended in the undesired and frightening direction (Ito, 1997). Now that Finland had become a part of Tsarist Russia however, that status was completely reversed; Finland was now the forefront of Russia towards Europe (Screen, Syrjö, 2003). It would be through Finland that the European winds of culture and civilization would enter Russia, since the major connection between Russia and Europe was the Baltic Sea. In one fell swoop, Finland went from a backwater buffer zone into a forerunning display piece.

There is absolutely no contest to the most important Finnish urban project of the century. This story begins with a devastating fire in 1808, in which 60 plots of land were razed to the ground. The rebuilding efforts started in 1810, only after the war had officially ended. First, simple plans of rebuilding were drafted, but gradually the plans become more and more ambitious, and in the beginning of 1812 a crucial turn of events occurs. A statement by Johan Albrecht Ehrenström (1762-1847) changed the fate of a small coastal town that had been founded already in the beginning of the 16th century forever (Lilius, 2014a). We are, of course, talking about Helsinki, "the White City of the North."

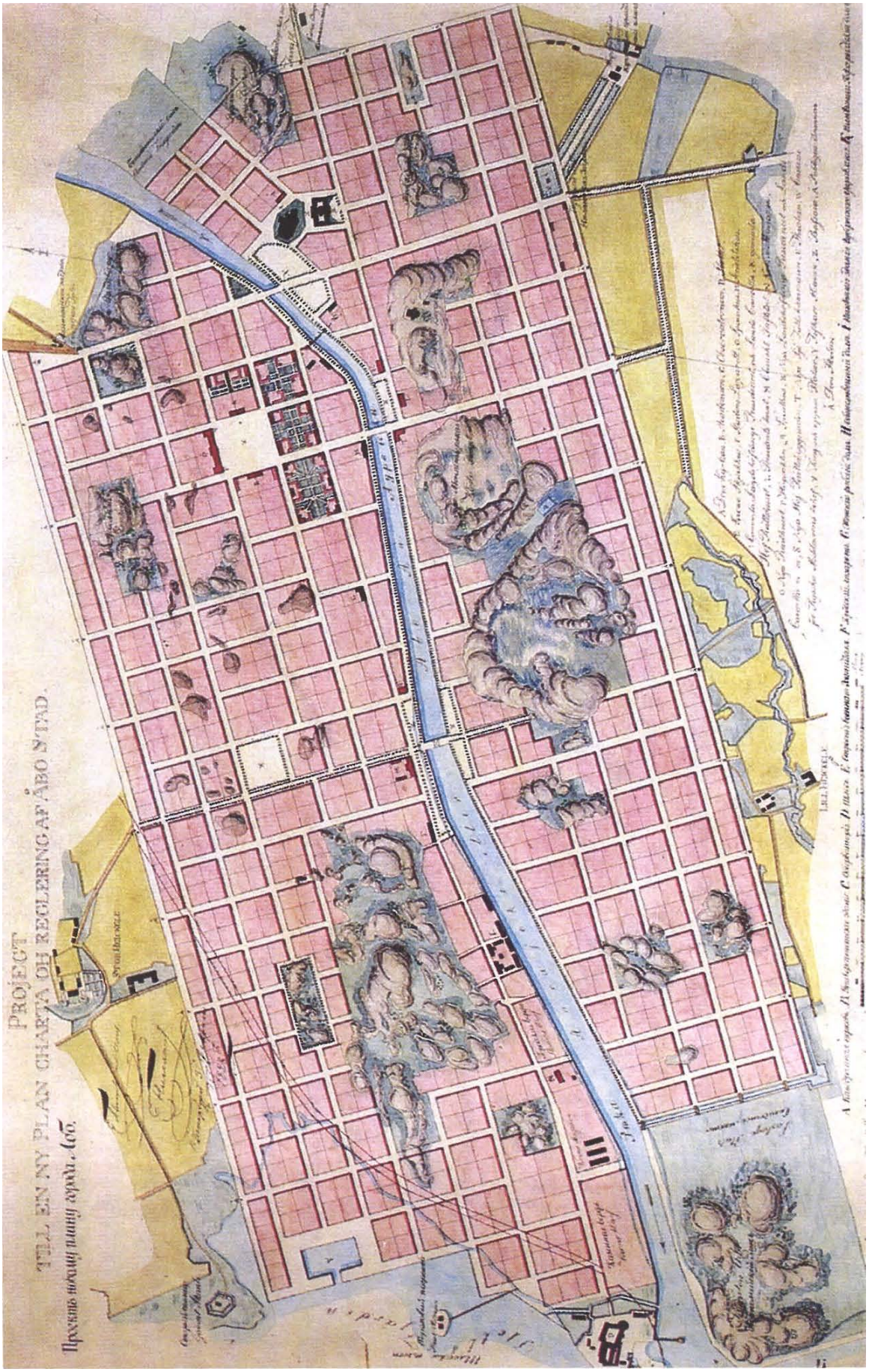
Since 19th century can be called a veritable century of capitals (Miyake, 1997), it is almost poetically befitting that Helsinki enters the picture right around this time. Since Turku had existed since time immemorial as an important trading hub on the Baltic, and thus been in close contact with Sweden for as long as it had existed, there was a pressing need for a new capital. In 1811, plans to move the capital away from Turku and into Helsinki were already in full swing. The crucial statement by Ehrenström however steeply criticized the drafted plans, and stated that Helsinki should be a city worthy of being a capital, that it should house all the central functions of the newly founded Grand Duchy, that is should develop into one of the most significant trading ports of Baltic, and that it deserves a holistic architectural image worthy of this (Lilius, 2014a). Ehrenström drafted the new plan so that it would also include the growth of the city, and the plan was revised several times, until the 1817 plan combined everything into one coherent classicistic plan that was centred around a marketplace.

Helsinki is often credited to another individual however, one Carl Ludwig Engel (1778-1840) from German that is. He came to work in the Helsinki Rebuilding Committee in 1816 as an architect who Ehrenström had deemed worthy and able to tackle the important task of building the new capital. It was probably for the sake of Engel that Ehrenström revised the entire City Plan in 1817, and Engel did not fail to meet the expectations laid on him. The rebuilding of Helsinki was in full swing when the construction of Engel's monumental centre of Helsinki began. Today, Helsinki is a rare, world renown example of neo-classicist-style urban design (Miyake, 1997). But Engel's influence on Finnish cityscapes are far from finished with Helsinki.

Fires were still a massive problem all around Finland. Devastating fires still pestered the wooden Finnish towns and cities in the beginning of the 19th century, and in 1827 Turku suffers the worst fire in the Nordic history: Over 2500 buildings were reduced to ashes (Sundman, 1991). It is Engel who drafts the new city plan for the rebuilding in 1878, only one year after the fire. The plan is made in the typical gridiron style of classicism familiar to us from the previous era. However, what makes this new gridiron plan so revolutionary, is not its stylistic choices, but that it was made without any reference to previous landownership (Sundman, 1991). Thus the precedent had been created, and most Finnish towns follow eagerly in the wake of the great German trailblazer.



Final form of Helsinki city plan designed by Johan Albrecht Ehrenström, approved by Tsar Alexander I, 1817; Parts drawn in red already exist. (Wikimedia Commons)



New City Plan of Turku, Carl Ludwig Engel, 1828 (from Lilius, 2014a)

Turku; Panorama taken from the top of the Cathedral by Johan Jakob Reinberg in late 19th century (Wikimedia Commons)

The new city plan of Turku is a significant plan in the Finnish urban tradition for several reasons. One, it straightened the organic medieval street network and gave the streets clear hierarchy, most being 18 meters wide. This also completely changed the landownership, as mentioned above. Two, it included tree-lined avenues in strategic intervals, which together with the wide and open streets would act as firebreaks. Three, the plots in the city are now divided hierarchically, introducing social segregation into the Finnish city perhaps for the first time in Finnish history. Neo-classicism also favoured axials and freestanding houses, as well as stone buildings. These ideals were also upheld in the new Turku plan with the new public buildings, the old castle and the church. The axials were somewhat weak and few in number though. In short, together with the Helsinki City plan, these two plans conceived the new Empire-style of urban image and planning (Lilius, 2014a).

Nevertheless, we must not forget that Finland was still extremely rural though; only about 5,8% lived in urban areas in 1840's, and over 80% were occupied by forestry and agriculture (see table). In effect, the lifestyle of the common people had not changed very much in the past centuries. The biggest change must have been the new land reform called *Isojako*, meaning "Big division" that was executed in the latter half of the 18th century. Originally decreed in the *Riksdag of the Estates* in 1757, this redistribution of lands put a stop to the previous open-field system that had been in use since the medieval times, and consequently breaks the small village communities that used to exist in the middle of the shared fields into sparsely located big farms.

These farms were self-sufficient to a significant degree; producing their own food, animals, furniture, simple cloths and clothes, wood, buildings etc. to a very large extent. The farm households were large and inclusive, usually housing the man of the house with his wife, their children, some of their parents, and a whole bunch of farmhands, both men (*renki*) and women (*piika*). Their pay was upkeep, clothes, cloth and some money every year. For steel, tools and specialist goods, either trips to the nearest towns, or the arrivals of a wandering salesman were necessary. In a somewhat odd, although extremely Finnish way, one of the most extensive accounts into this kind of rural lifestyle is provided by a series of children's books called *"Koiramäki"* by Mauri Kunnas.

When farmhands wed, they usually moved out of the farm into their own cabin somewhere nearby. They would then become something known as *"torppari."* This word does not have an exact English translation, but the institution was so significant in the Finnish society of the time, that it deserves some elaboration for those unfamiliar with the term. The word comes from *"torppa,"* which means a small cabin in the forest, or a croft. *Torppari* is someone who does not own the lands he works and harvests. He rents the right to habit and work the lands from the farmer who owns the land, hoping

to someday buy the land for himself. The rent was not paid in coin, but in work, or sometimes in produce, thus forcing the *torppari* to do double work, first working for the landlord and only then working his own fields. The institution was rooted in 17th century noble houses, which needed a lot of manpower to manage the extensive lands, but the right for peasants to rent their lands to *torppari* was given only in 1740. Soon, this institution constituted a new, albeit small layer of society itself, roughly 2,5% of the population throughout the period. (Vahtola, 2003).

However, simultaneously a gradual urbanization started to build up speed, and slowly the Finnish towns noticed that more land was needed for the budding industries, as well as for all the people they were luring in. Development was concentrated and fast (Sundman, 1991): In 1857, steam powered sawmills are first permitted, and in the 1860's steam powered machinery in manufacturing entered the picture. The famous Finnish wood-pulp industry opened up in the 1880's. Joint stock companies are introduced in 1864, only two years after private banking, and the first railroad is opened to traffic in 1862, running between Helsinki and Hämeenlinna. Steamboats began operating in 1833, and the canal between the Baltic and the big Eastern lakes in 1856 also did their part in finally breaking the long lull and silence of the rural inland Finland. What comes to the growth of cities, I give the floor to Sundman himself:

> *"[…] In terms of land available, the towns were well placed to respond to the changing conditions of urban planning. By tradition the crown had donated considerable amount of land to all new town foundations, and the tradition persisted during 'the period of autonomy', under tsarist Russia. […] Finnish senate – which headed the central administration under the chairmanship of the governor general – had the right and the obligation to arrange donations of land to the future towns by compulsory purchase of land in the area."*
>
> Sundman Mikael, 1991, p. 63

It is around these times when commodore Matthew C. Perry (1794-1858) and his infamous black ships arrived in Japan for the first time in 1853. Perry arrived in Uraga (浦賀), at the mouth of what is today known as the Tokyo Bay. Like every foreigner before him, he was informed that Japan does not trade with foreigners, and that the only port open to foreigners is Nagasaki. Perry however, well informed by the previous accounts of contacts between foreign captains and Japanese, was well aware of the Japanese customs and extremely hierarchical culture. He decided to ignore and refuse all demands to turn away, presented the Japanese government with a letter informing them that he will open fire and destroy all opposition if he is not received properly, and fired blanks from his mighty cannons to intimidate the Japanese even further. He was allowed to land in Kurihama (久里浜), where he presented the Japanese officials with official letters, and informed them that he would return one year later for a reply.

Perry returned from Hong Kong in 1854, only half a year later, and this time with 10 ships to intimidate the Japanese even further, a move showcasing just how well he had studied the extremely hierarchical Japanese customs. He was allowed to land in Kanagawa (神奈川), and after a month of negotiations, a trade agreement was signed. Perry returned to the United States having unknowingly sparked the chaotic and bloody *Bakumatsu* (幕末), meaning "the End of Bakufu," which lasted from 1854 to 1867. Japan's isolation was thus forcibly, and violently drawn to a close, and a new age opened for Japan as well.

This development must be understood in context, as the background lays the foundation for understanding the beginning era. While new ideologies, technologies and the political world were

forbidden from the merchants of Edo-period Japan, money still steadily flowed into their pockets throughout the period, thanks to the policy of not taxing commerce at all. Towards the late Edo-period, most *samurai* families were deep in debt, and the richest merchants were gradually able to buy their way into esteemed *samurai* families through adoption and marriages, thus finally gaining some sway in the political sphere as well. It is estimated that some of the biggest merchant families and companies (namely Mitsui (三井), Sumitomo (住友), Ono (小野), and Yasuda (安田)) owned roughly 70% of the hard currency in all of Japan in the late Edo-period (Ushio, 2005). The merchants were thus responsible for creating most of the high material culture of Japan as Edo-period progressed. And with the arrival of Perry, the time had come to utilize all the influence these houses had mustered.

In fact, Ushio argues that it were the big merchants who orchestrated the whole end of the period, and the overthrowing of the decadent *samurai* class (Ushio, 2005). The bitter and discontent *tozama daimyo* of the outer domains were frustrated with the continued discrimination and regression that had lasted for 250 years, and now they had the perfect motive to act upon. This motive can best be described by their political slogan, *"sonnō jōi"* (尊皇攘夷), meaning "revere the emperor, and expel the barbarians." Backed by the big merchants, the rebellious southern *samurai* today known as the *Ishin Shishi* (維新志士), especially from the Satsuma (薩摩藩), Chōshū (長州藩) and Tosa (土佐藩) domains, openly rebelled against the *Tokugawa Shogunate* in what is today known as the *Boshin war* (戊辰戦争) of 1868 to 1869. Backed by some of the biggest merchants of the time, who also paid the undecided daimyo to stay out, the war was quickly fought. Some of the *Ishin Shishi* then went on to become leading figures in the new Meiji Government.

Samurai of the Satsuma domain during the *Boshin war*, Photo by Felice Beato in the 1860's (Wikimedia Commons)

The interesting things is, almost everyone in Japan wanted the crude foreigners out during the *Bakumatsu*, especially the revolutionaries of the *Boshin war*, the rebellion that brought down the *shogunate.* The war was fought over whether to return the Imperial court and the Emperor back into power, whereas the Tokugawa loyalists wanted to keep the old system. This sentiment is important to understand, as the realities of the World begin to dawn on the Japanese.

Although the war against the radical partisans of the *shogunate* was still raging in Northern Japan, for what concerns our story, the Boshin war ended towards the end of 1868 with the surrender of the *Tokugawa shogunate* for a considerable sum of money. The young Meiji Emperor marched with the imperial troops to Edo in what is often referred to as the glorious last parade of the Edo-period. Thus, the Emperor's residence is officially transferred from Kyōto to Edo, which is consequently renamed as *Tōkyō* (東京), "the eastern capital." The name is commonly simplified as Tokyo in modern English. The *isshin shishi* imperial loyalists quickly assembled a new government, and thus Meiji-period, "the age of enlightenment" had begun.

Already during the *bakumatsu* the Japanese leaders, especially the *isshin shishi*, had become painfully aware of their ignorance. The great powers were playing world politics all around Japan like chess, with the world as their board; British, Germans and Americans were tampering in China, the Dutch were in the East Indies, the French meddling in Indochina, Britain had India, and the Russians were encroaching northern China (Sorensen, 2002). Thus, the prevalent ideology of Meiji-period was born amidst global colonialism, out of fear for Japan itself, and it is best expressed in three famous slogans; *fukoku kyōhei* (富国強兵) meaning "prosperous realm, and strong army," *bunmei kaika* (文明開化) meaning "civilization and enlightenment," and *jōyaku kaisei* (条約改正), meaning "amendment of (unequal) treaties."

Japanese farmers during the Meiji-period, before 1912, photographer unknown (Wikimedia Commons)

Finnish peasants of Ruokolahti in Eastern Finland, drawings by Severin Falkman in 1888 (Wikimedia Commons)

Perhaps the single most important initiative of the new government towards these ends was the Iwakura mission of 1871-73. For almost two years retinue of more than a hundred Japanese leaders, officials and students led by Iwakura Tomomi (岩倉具視) (1825-1883), the Junior Minister of State (*udaijin;* 右大臣) himself, toured around the western world, visiting United States, the British Empire, Germany, France, Belgium and Holland, leaving behind many of the students that had come with them to learn more. Every one of the retinue, even the conservative Iwakura himself, returned to Japan as changed men, finally realizing how far back their country had fallen. Plans for invading Korea were instantly scrapped, and via sending countless more students abroad to study, and inviting foreign specialists to Japan as experts, furious westernization of Japan was begun immediately after.

The long Edo-period had left its strong marks however. The newly founded government was composed of the big merchants and *samurai* houses that had allied themselves with the merchants, and thus taxing commerce was synonymous with taxing their allies, the fellow merchants. Instead, the heavy taxation of the peasants continued, and the peasants, used to the cruel treatment, did not complain (Ushio, 2005). They knew no better, and just like in Finland, their life knew no big change throughout the period. Just like the rural Finns, they still ate the same food, wore the same clothes, lived in similar houses, used the same tools as they had for a century, and for all that matters, for decades they would not know that the time had moved on (Sorensen, 2002).

Furthermore, the westernization of Japan took a unique turn as it were the Japanese themselves doing the westernization. Unlike elsewhere, no great power could colonialize Japan, and thus the modernization of Japan happened on native terms, instead of foreign. Ergo, the Japanese would import only the best of everything, and only the aspects that fit into the Japanese worldview, like meritocracy and effectiveness, were accepted. Everything that did not, like the western individuality, was simply discarded, leading to a unique, quintessentially Japanese modernization. Britain was used as the model for industrial, railway and naval development, Prussia for military organization, France for police, legal and educational systems, and American expertise was utilized in frontier development in Hokkaido and future colonies (Sorensen, 2002)

Meiji Land Reform, one of the most important policies of Meiji-period Japan was also simultaneously taking place. All manner of restrictions on land were lifted in 1871 and 1872, including restriction on what can be grown, and the ban on selling land. In 1873, the new Land Tax Act (*chisokaisei*; 地租改正) was introduced, in which the taxation was based not in yielded produce, but as portion (3% at the time) of the assessed value of the land every year (Sorensen, 2002). Furthermore, the tax had to be paid in coin, not in produce, and the payer would be the landowner instead of the farmer. Naturally, following the introduction of the new law, a re-survey of the lands to determine their 'assessed value' was in order. Ownership of each plot was given to the families that farmed the land, and to registered landowners in cities, meaning largely the big merchants. Thus, owing to the previous method of farming whatever land the family could rent from here and there, the official patchwork landownership of Japan is born (Shelton, 2012).

The 1870's were fully spent consolidating, but in 1881 a crucial question reared its head; in conjunction with the disagreement among the ruling elite, the "Freedom and People's Rights Movement" (*jiyū-minken undō;* 自由民権運動) demanded a constitutional government, together with an elected parliament, instead of the practically militaristic leadership that had been in force so far. A promise to establish a parliament by 1890 was made, and thus between the long period from 1881 to 1889 the new Constitution of Imperial Japan (*dai-nippon teikoku kenpō*; 大日本帝国憲法) is carefully crafted so that power stays firmly in the grasp of the *genrō* (元老), the elder statesmen, and in 1890 it finally come into effect (Ushio, 2005). Cabinet decision-making was introduced in 1885, and Privy Council was formed in 1888. Disregarding all the political theater, the crucial thing about the new Meiji Constitution was not its content however, but in the fact that the ruling elite managed to convince the Japanese that the constitution was bestowed upon them by the Emperor, not won over by the people, thus making it a divine event instead of a show of mundane power by the common people.

Even further, only males of over 25 years of age who paid more than 15 yen per year in direct taxes had the right to vote, narrowing the electorate to a measly 1,1% of the population; the rich landlords of rural Japan. It may seem odd that this point is brought up so often, but, especially for the western reader, the fact that Japan did not tax commerce for *three centuries* cannot be emphasize enough. At the time, rural land taxation constituted about 93% of the whole tax income of Japan (Ushio, 2005)!

As for the city structure itself, the tradition of placing Tokyo before every other city in importance was continued in the Meiji-period as well. In Edo-period, it had been an amalgam of the realm in miniature size, with every daimyo of the land having a big residence complex with hundreds if not thousands of direct servants living there constantly. In the Meiji-period, Tokyo was to be elevated into something that would showcase the achievements of Japan to the World. Especially the low level of Japan's infrastructure had shocked the members of the Iwakura mission, the dirt roads and rivulets of Japan standing in strong contrast to the cobbled streets and squares of western cities, not to mention their sewers. For example, back in Meiji-period almost all nightsoil was still manually collected and transported to the countryside to be used as fertilizer by the *eta*.

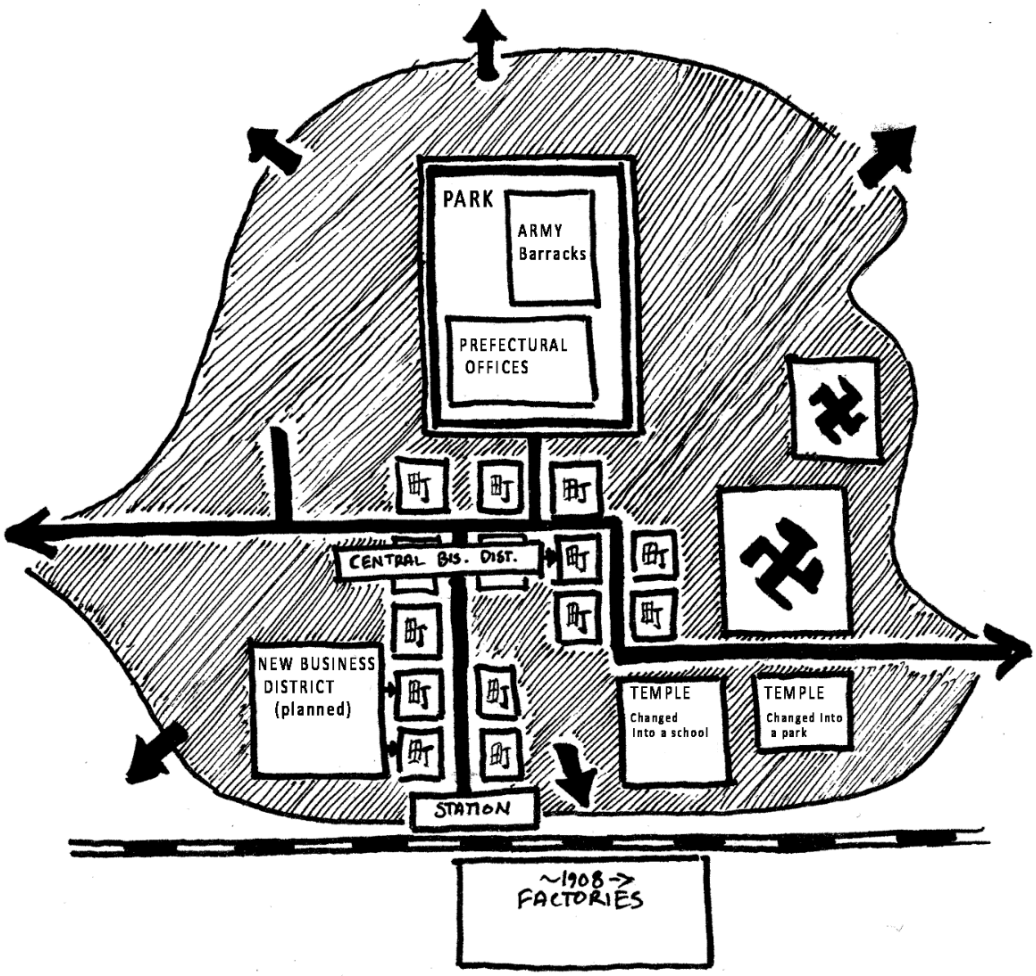
The Ginza "Bricktown" (*ginza rengagai*; 銀座煉瓦街) is the first of these initiatives. In 1872 a particularly fierce fire had destroyed around 3000 buildings, homes to roughly 50 000 people, in a prime commercial area, right next to the Shinbashi railway station (新橋駅), through which foreign passengers would arrive to Tokyo. Instead of developing the area in the usual manner, a decision was made to develop the area as a modern, western styled and fire-resistant district made of stone. Clear hierarchy of streets was drawn, and the landowners were required to build in brick, which gave the area its popular name. Streetlamps and trees were introduced, but alas the higher than expected costs together with the unpopularity of the area shut the project down halfway in 1877, with only 993

buildings completed, about third of the planned amount (Sorensen 2002). Not only a financial failure, even the foreigners were unimpressed with the 'western' district, often quoting their bafflement at why Japan tried so hard to mimic western cities when it had so strong and unique urban traditions of its own (Ushio, 2005).

The failure of Ginza proved that westernizing entire Tokyo would be next to impossible, and thus a different approach to modernization was undertaken; the Tokyo City Improvement Ordinance (*Tōkyō shiku kaisei jōrei;* 東京市区改正条例). This ordinance, passed in 1888, was aimed at solving all manner of urban problems in Tokyo, the most important being the chaotic residential districts, where inflammable *yakeya* longhouses were built in a dense pattern without much of a plan. Other targets of the plan were the narrow and unpaved streets, the low material quality of buildings, sanitation, tramlines and the general low level of infrastructure.

The success of the ordinance was extremely mixed. Originally, a building code was supposed to accompany the ordinance, but due to opposition to the ordinance itself, only the ordinance was passed, and the building code dropped. This resulted in the ordinance being little more than a new and elaborate infrastructure plan. However, some of the reforms in the plan were successfully carried through, the fire-prevention districts probably being the most significant one. After a series of devastating fires in 1881 turned over 10 000 buildings to ashes in downtown Tokyo, 22 fire-prevention zones were identified, and the owners of plots in these long strips bordering larger areas were required to rebuild their buildings to a new fireproof standard set in the plan within 7 years (Sorensen, 2002). This regulation, unlike everything else in the plan was extremely strict, and it did nothing less than virtually eliminate the destructive fires that had plagued Tokyo for three centuries! This is a clear sign of the fact that the problem in Japanese urban planning was not in administrative authority or leadership, but lack of motivation and political support.

Ginza towards the late Meiji-period, ca. 1905, photographer unknown (Wikimedia Commons)



Japanese castle towns in Meiji-period, redrawn from (Sorensen, 2002) by author, p. 80 (see text)

The last thing we need to talk about regarding development of Japan during the Meiji-period are railways. The timing of Japan opening to the world is crucial, as the 19th century is the age of railways all around the world. Japanese leaders immediately realized the importance of railways, and railway development was one of the most important agendas of the Meiji government. However, as everything needed to be imported from Britain, the costs quickly escalated, and the development was stalled. The lack of funds together with a cautious government stalled even the private sector, but in the 1880's the government started to encourage private railways, strongly guiding the development all the way (Sorensen, 2002). Consequently, by 1902 some 4843 kilometres of private tracks had already been laid against some 2071 kilometres of government-built tracks. Following, in 1906 the government nationalized all trans-city routes, leaving only a couple of local routes to private hands. After the nationalization, private companies were only allowed to build local commuter lines. A decision that, together with the importing of trams from US, has greatly shaped the Japanese urban fabric ever since, as we will soon see.

Tokyo as well as other Japanese cities developed according to these aspects. Practically every planning effort was centred on Tokyo, and the rest of the country followed in the wake if they were able to. One of the administrative reforms of Meiji-period was the re-organization of the country in 1872; over 300 domains (*han;* 藩) of the Edo-period were cut down to barely 72 prefectures (*ken;* 県) and 3 special city-prefectures (*fu;* 府), namely Tokyo, Osaka and Kyoto. In an identical, although much larger in scale, fashion to Finnish towns and counties, the castle towns that got the status of a prefecture capital typically prospered, while the rest of the castle towns quickly started to stagnate.

However, the most important aspect of Meiji-period urbanization is already familiar to us from Edo-period itself; the dense unplanned sprawl all around the central planned functions. Before, this chaotic structure was somewhat intentional, and served defensive purposes to some extent, but in the Meiji-period the situation starts to escalate quickly. While agriculture was still the main livelihood to rural populations, the population cap in rural areas was reached already during the Edo-period, and the population growth stagnated. With the Meiji-period, the population started to grow again, and the surplus of rural areas was drawn to the cities by the various budding industries, including the budding service industries. The local train- and tramlines only made the problem worse, as they allow for much longer distances between home and workplace.

It is precisely here where the building ordinance was so badly needed, and why it was such a great setback to Japanese urban planning that applicable ordinance was first passed as late as 1919. Outside the few planned and well thought-out central areas, the urban development followed the same patterns it had during Edo-period; without any specific bigger plan, mostly in medieval organic shapes. This ideology was not entirely bad, for the chaotic structures allowed the Japanese village spirit to thrive even in the large cities and paved the way for some of the more charming aspects of modern Japanese urbanism (Shelton, 2012). However, as the country was driven forwards by the desperate struggle to modernize as quickly as possible, the idea of "public good" would not enter into Japanese ethos or culture for decades to come.

Towards the end of the period, Japan had its eyes set on aggressive imperialism, learning expertly from the other world powers. First, following a peasant rebellion and the consequent political incident, Japan installed its own puppet government, and the First Sino-Japanese War (1894-1895) was fought against the objecting Chinese. Japan crushed the technologically inferior Chinese troops quickly, and China ceded both the Liadong Peninsula and Taiwan. An intervention by Russia, France and Germany however forced Japan out of Korea. In turn, Russia took the peninsula, and built the fortress of Port Arthur. Ultimately, the Japanese did not stand for such mistreatment, and surprised the Russian navy in 1904, sparking the Russo-Japanese War (1904-1905). The war was a complete humiliation to Russia, both the Pacific Fleet, and one year later, the Baltic Fleet were utterly destroyed, and although the ground war was managed a little better, the war ended in a resounding Japanese victory. Korea was declared a protectorate of Japan in 1905, and downright annexed in 1910. Consequently, some of the centralized planning effort was thus directed to the new colonies.

Meanwhile in Finland, tsar Alexander II called for the Diet of Finland (*Riksdag of the estates*) to convene for the second time in 1863, and the autonomy of Finland was increased even further. The assembly was demanded because the long period without a Diet had found Finland governed arbitrarily by officials without almost any guidance, nor restriction. Following in the footsteps and promises of his predecessor, Alexander II steeled the autonomy of Finland much further (Vahtola, 2003): For example, he instituted the new entirely Finnish currency, *markka* (Finnish mark), and elevated the Finnish language to an equal position with Swedish, which opened a lot of new opportunities for the common folk. Several other administrative reforms that enhanced the autonomous state of Finland were also introduced.

After this assembly, the Diet of Finland started to convene regularly in the new capital of the Grand Duchy, Helsinki. Even further, the Tsar was basically ratifying every motion exactly as it was presented to him (Vahtola, 2003). The new special status of Finnish language was reasoned as a step away from the Swedish sphere of influence. The newfound lively activity of the Diet also empowered the printed word, and thus popularity of newspapers and books quickly increased. In 1860 there were some 17 newspapers, and by 1890 this number had increased to 60, which together printed out 192 issues per week, with several newspapers publishing an issue 6 or 7 times a week (Vahtola, 2003). Sadly, the

decade of 1860's was a period badly shadowed by the great famine years (*suuret nälkävuodet*) of 1866 to 1868 which killed between 150 and 200 000 Finns, meaning roughly 8-10% of the population. Nevertheless, this was the time of a civil society rising, and it stands in stark contrast to the Japanese society of the age.

All good things must come to an end, however, and following the death of Alexander II criticism of Finland's special status started to take root. in 1899 the *February Manifesto* was issued by tsar Nikolai II (1868-1918), and although not as bad as some claimed, it failed to impress the Finns who were hoping for ever more autonomy. In quick succession, the Russian language was elevated to the official language, and the Russian currency of the time as the only acceptable money in all parts of the realm. The Finns revolted in open, and rebelled in silence, causing the Russian officials to take drastic measures against the populace, such as censorship of press. Ultimately, Nikolay Bobrikov (1839-1904), then General-Governor of Finland and one of the main agents of russification, was assassinated by a Finnish nationalist nobleman Eugen Schauman (1875-1904) in 1904. This first wave of russification comes to an end in 1905 thanks to the humiliating Russo-Japanese war, and the Russian revolution of 1905, which escalated into a general strike that lasted for months.

Under immense political pressure from all around Russia, the tsar accepted a new motion for Finnish government in 1906, which created the Parliament of Finland (*Eduskunta*) with its 200 democratically elected members. As the first in Europe, and second in the whole world, women of Finland received the right to vote in the same motion. Soon however, a new wave of russification started, and it is under this fateful oppression, which only fuelled the flames of nationalism in Finland across the estates and classes even further (Vahtonen, 2003), that Finland enters the Taisho-period. Nationalistic spirit is elevated by several famous scholars, artists, writers and poets, including Elias Lönrot (1802-1884), the compiler of the Finnish epic, *Kalevala*, Jean Sibelius (1865-1967), the composer of *Finlandia*, Aleksis Kivi (1834-1872), the author of the book *"Seven brothers"* (*Seitsemän veljestä*), and Johan Ludvig Runeberg (1804-1877), the famed poet who compiled the "Tales of Ensign Stål" (*Vänrikki Stålin tarinat*), among many others. *"Swedes we are not, nor Russians will we be, so instead, we shall be Finnish,"* as the famous quote summarizes.

Consequently, only few new cities were founded in either nation. Tsar Alexander II decreed 5 new towns in 1856, and ultimately only 10 were founded during the entire period. Meanwhile, Japan was starting to colonise Hokkaido (北海道), the Northernmost of the four big Japanese isles, but otherwise the urbanization efforts are mainly centred on the existing urban fabric. In the grand scheme of things, these are small efforts compared to the impact of the period in the hearts and minds of both nations:

Japan had taken several steps towards extreme centralization. The *genrō* and the new government were holding on to every scrap of power within their grasp, and the Home Ministry (*naimusho;* 内務省) fulfilled its duties with jealous enthusiasm (Sorensen, 2002). The spirit of this administration was best described by yet another Japanese slogan, *kikan inin jimu* (機関委任事務), literally translating as "agency delegated functions." This meant that the central government did not decentralize an ounce of its power unless it absolutely had to. Instead, they delegated these functions as duties, and quite often without any real resources to realize them. The local governments were thus left to their own devices to accomplish these increasingly difficult duties with only the meagre budgets they were granted by the central government. The prefectural governors were not even elected, but instead appointed by the central government as its representatives in the prefectures.

Here Finland is the polar opposite. The long period under Swedish rule had always included even the peasants in decision making, and now that Finland had become a Grand Duchy under Tsarist Russia, the state of autonomy was increased even further, even to the point of independent currency and

language. A reform of municipal administration in 1873 even gave the towns independent control over urban structures via finance departments of their own (Sundman, 1991). Thus, basically every level of governance from municipalities to the very Senate of Finland itself is acting in concert while still enjoying significant independency.

This comparison is already eerily similar to the comparison of Northern and Southern Italy in Robert Putnam's book. While Japan and Finland do not resemble Italy or its history in almost any way, it is hard not to see the similarities in the development of the two nations; Finland as a nation that was built on horizontal society, and Japan as a nation that was built on a vertical one.

Let us once again end a chapter with a curious link between Japan and Finland. In 1879, after successfully navigating the Northwest Passage for the first time in world history, the famed explorer Adolf Erik Nordenskjöld (1832-1901) lands in Japan for more than two months to repair *Vega*, his badly damaged ship. Although Nordenskjöld is often considered Swedish, he was in fact born, raised and schooled in Finland, and only fled to Sweden as a political refuge because of very uneasy relations with the Russian officials. Back then, Japan was still very new to the world, and Nordenskjöld was welcomed together with his crew with open arms and warm hearts. He met with many influential people and bought numerous Japanese books before sailing back home via India.

Taisho (1912-1926)

This short period of little more than a decade turns out to be increasingly interesting and important in the urban development of both nations. However, it contains another quite important historical event as well, and it is in the light of that event we must inspect the Taisho-period. That event was, of course, the First World War, which began in 1914, and while everyone thought it would be a fast war, only ended in 1918.

The parliament of Finland was struggling with the new wave of Russification, and it was largely thanks to the very poor success of Russia in the war, that Finland was left alone, and the parliament successfully defended the Finnish Autonomy. Should the war have ended like everyone thought it would, Russia could have had a truly concentrated effort in reducing Finland to mere part of the Russian Realm. Finland's position would likely have been completely reversed from what it ended up being. Ultimately, the long war brought out all the pent-up resentment towards the tsar and the archaic political, economic and social structures, and in 1917 the February revolution flared up. The revolution took place mostly in St Petersburg, the capital of Imperial Russia of the time, and saw the tsar Nikolai II abdicating the throne, thus ending the dynasty of House of Romanov, as well as Tsarist Russia. As the legitimacy of Finnish autonomy rested on promises of autocrats alone, this was a worrying development. A new provisional government was introduced, and new age was upon Russia.

Slowly, hints of civil society were also evident in Japan, as a new middle class of civil servants and white-collar workers was starting to form right next to the swelling blue-collar working class amidst the lightning fast industrialism and westernization of Japan. Japan took part in the First World War on the British side, an alliance that dated back to 1902. This alliance brought considerable industrial economic growth to Japan in the form of orders for munitions and other war materiel. The war also left many European nations blockaded, and the void they left behind further enhanced the industrial growth of Japan, a nation untainted by the war.

The citizen activism was enhanced by the quick urbanization that followed the industrialization, especially in the big metropolitan areas; while the population of Tokyo increased from 1 480 000 in 1905 to only 2 070 000 in 1930, the surrounding 82 towns literally exploded, their combined population of 420 000 in 1905 nearly *septupled* to 2 900 000! While smaller in size, Osaka, the old commercial hub of ancient Japan, together with the neighbouring areas showed an almost identical growth; from 470 000 in 1898 to 1 433 721 in 1924 for the city proper, and another 700 158 in the surrounding suburban areas. The portion of Japanese living in settlements of 10 000 or more nearly doubled from 18% in 1898 to 32% in 1920. It was the increased accessibility that the new train- and tramlines offered, that made this suburban growth possible. (Sorensen, 2002)

Furthermore, the sudden crazy increase in land prices encouraged price speculation over the land. After all, the true electorate of Japan were the big landlords of rural Japan. While the common folk were given the lands they cultivated in the Meiji Land Reform, small family farms were mostly unable to shoulder any bad years, driving them deep in debt, with their lands as collateral for the loans they had to take to pay the taxes.

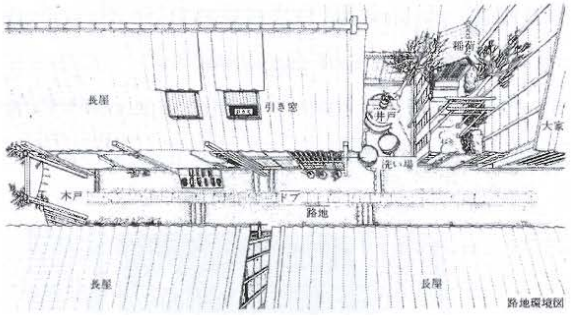
Without any regulations to hold the urbanization in check it ran rampant, and figuratively insane, without any restraints whatsoever. Industrial workers were crammed into extremely small and dense *nagaya* (長屋; "longhouse") housing units, one family often having but one room of 4-and-a-half tatami mats (*yojōhan*; 四畳半), a room mere 3 by 3 metres. Furthermore, a typical *nagaya*-block had a common outdoor privy, shared by some 15-20 families during the period. The situation was already as bad as anything Europe of the time could present, and Japan was, to best knowledge, only getting

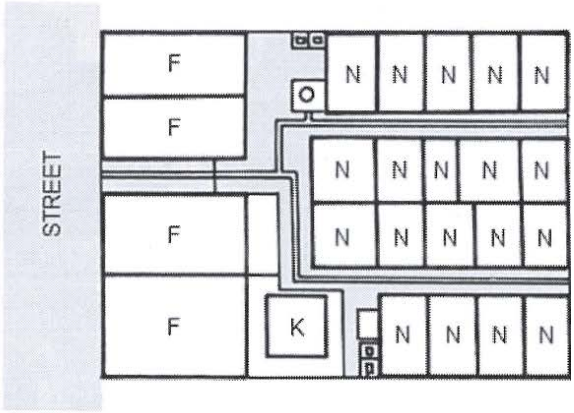
started. The constant rioting over increasing prices did not help in the least (Ushio, 2005). Reasons ranged left to right, from tram fares, prices of commodities, corruption in the higher echelons of society, and so on. The worst however were the Rice Riots of 1918, springing from the increasing price of rice, and affecting everyone, from the industrial workers in cities, to farmers and fishermen in the countryside, which had to be quelled by violent military intervention in the end. Needless to say, the situation was getting out of hand *fast.*

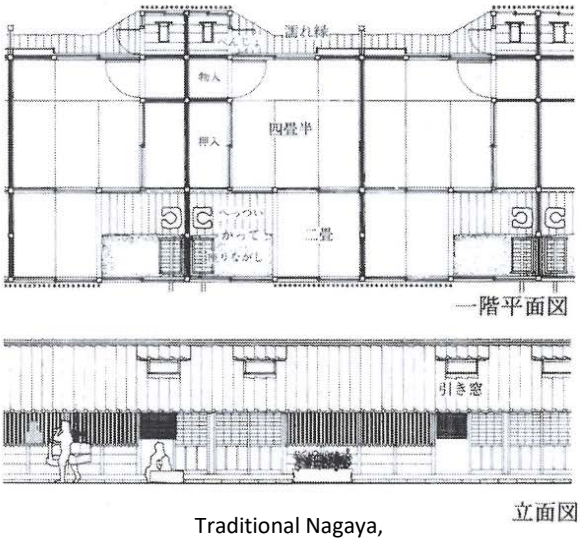
Even further cause of concern for the elite were the increasing labour unions that had numerous demands. The Public Order and Peace Law (*Chian Keisatsu hō;* 治安警察法) of 1900 was a continuation of the extremely strict central control of Meiji-period, and it had decreed political activity banned from minors, women, members of military and police, forbidden gatherings and conventions of over 5000 people, as well as outlawed strikes and labour-organizations. The first left-wing political party of Japan, the Social Democratic Party (*shakai minshutō;* 社会民主党) was outlawed within a day of its founding, even though it was formed in accordance with the laws of Japan, *including* the Public Order and Peace Law. (Ushio, 2005) Tensions were extremely high, and action was required.

It was in this context that the first Planning law of Japan finally emerged, after much debate. Numerous scholars were very active in the 1900's and 1910's in advocating urban planning and regulations. Some were naturally extremists, but others had views more acceptable to the central government, up to a point where government leaders agreed to write prefaces to their books and articles, thus giving these an unofficial official seal of approval. It was during this period when the word *toshi keikaku* (lit. "urban planning," see *terminology*) appeared for the first time, used by professor Seki Hajime (1873-1935) (關 一) in 1913 (Watanabe, 2007). In 1919 the "City Planning Law" (*toshi keikaku hō*; 都市計画法) was finally introduced, and it was under this law that the urbanization in Japan would take place until the next complete overhaul of the law in 1968.

The City Planning law was a collection of five different systems; first, the long-awaited building code in the form of "Urban Buildings Law" (*shigaichi kenchikubutsu hō;* 市街地建築物法);







Traditional Nagaya,
adapted from (Shelton, 2012)

second, Land Use Zoning (*yōtochiiki;* 用途地域); third; the Building-Line -system; fourth, a system for designating public facilities (*toshikeikaku shisetsu*; 都市計画施設); and most importantly, fifth, the Land Readjustment (LR) -system (*kukakuseiri;* 区画整理) (Sorensen, 2002).

The Urban Buildings Law was a sister law to the City Planning Law, and together these two created the regulatory basis for controlling the urban fabric of Japanese cities (Watanabe, 2007). Both were simple in content, and the Urban Buildings Law provided detailed regulations of land use and construction to the zones that were set in the City Planning Law. While both laws have been updated and amended constantly, the system of having two separate laws dictating the urban planning is still in use today (Sorensen, 2002). Also, considering the very weak regulations instituted, the law was about controlling urban growth, and not about city planning per se.

The building line system had was based on three articles of the City Planning Law; One, a road is any road greater than 2,7 metres in width, Two, that all roads are considered "building-lines," and Three, that building could only take place on lots that were fronted to a building line (Sorensen, 2002). The idea behind the building-line system was adapted from German *Fluchtlinienplan* system. Unfortunately, this system quickly proved, unlike its German counterpart, too inclusive. Nevertheless, this at the very least forced landowners to collectively build decent roads in front of their lots, a measure that did alleviate some of the problems in the extremely dense *nagaya*-blocks.

Toshikeikaku shisetsu, the system for designating public facilities was a little more complex. First off, the word *shisetsu* (施設) translates very badly into English, having elements of both "facilities" as well as "institutions" equally in it. This means that the "facilities" mentioned in the name actually mean both the hard infrastructure, as well as the soft planning institutions, such as zoning maps. In effect, this system meant that the planning offices could designate areas into certain soon-to-be uses with maps. Buildings could still be built in these designated zones, provided that they were no more than 2 stories tall, and 'easily removable' (Sorensen, 2002). This part of the 1919 planning system was arguably the worst in the set, as while it did not limit the urban sprawl in almost any way, it did require all plans to be approved by the central authorities. This gave the central planning authorities incredible power over detail planning in the municipalities, furthering the centralization of administration.

Urban Buildings Law zone restrictions, 1919

	Land use restrictions	*Permitted coverage*	*Height limit*	*Slant plane restrictions**
Residential	*Prohibited uses:* Factories with more than 15 employees, or enngines of more than 2 horsepower, or steam boilers; parking garages with more than 5 parking spaces; theaters and cinemas; places of assignation; goods warehouses; crematoria, slaughterhouses and garbage incinerators	< 60%	19,7m	Road width x 1,25
Commercial	*Prohibited uses:* Factories with more than 50 employees or with engines of more than 10 horsepower; crematoria, slaughterhouses and garbage incinerators	< 80%	30,3m	Road width x 1,5
Industrial	No prohibited land uses	< 70%	30,3m	Road width x 1,5
Undesignated area	Apart from factories of large scale, or that may present public health hazards or that are dangerous, no prohibited land uses	< 70%	30,3m	Road width x 1,5
	Scenic Areas (Fūchichiku; 風致地区*)*			
	Beautiful City areas (Bikanchiku; 美観地区*)*			
	Fire Prevention Areas (Bōkachiku; 防火地区*) (Type 1 & Type 2)*			

*Building height is restricted to within a slant plane based on the distance from the opposite side of the road to the building front.

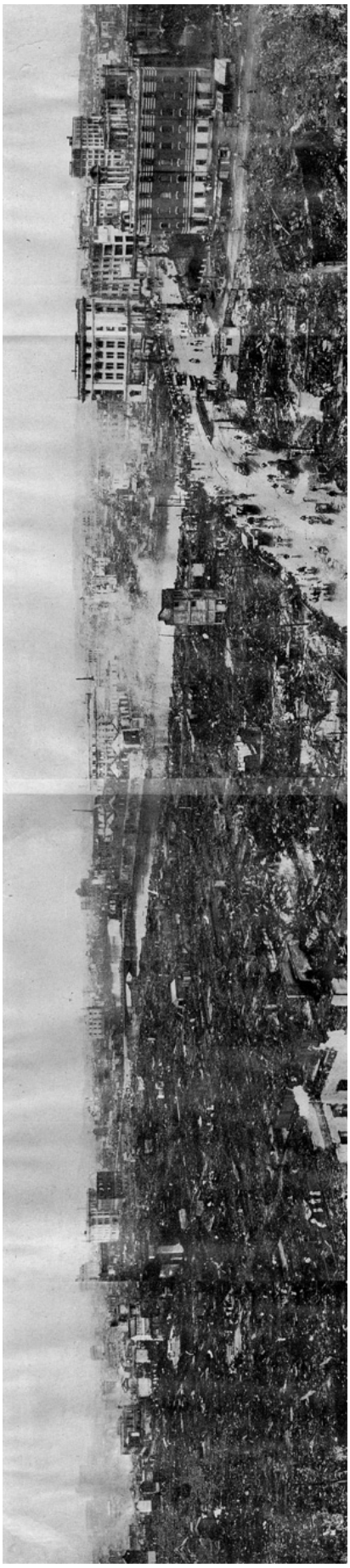
The four zones of City Planning Law of 1919, adapted from (Sorensen, 2002)

In a way the most important part of the 1919 law is the Land Readjustment act. In terms of effect, the other four parts had much more impact in the cities of Japan, but in the grand scheme of things, Land Readjustment had its roots in late Edo-period agriculture, and proved more resilient than any of the other parts; it is still in active use today! In effect, the system worked like this: First, all the land within a project area is pooled together, reorganized and then divided again among the participants. A certain portion of the land, typically around 30%, must be donated to the planning authorities to be used as roads, parks, and new plots that can be sold to finance the project. Typically, the increased value of the new plot acts as compensation. Furthermore, if 2/3 of the landowners, meaning 2/3 of the land in the project area, agree to a Land Readjustment project, the rest can be forced to participate as well, thus preventing free-riders or single contrarians from spoiling a project. The truly important feature of this system however was that Land Readjustment project could be organized either by local governments, *or* by private landowner associations, neither one in no way related to the central planning authorities.

Even though the overall planning system of 1919 was, frankly put, lacking and full of holes, it was nevertheless an important step forward, that had the potential to change the way Japanese thought about urban planning. However, this was not to be. In a turn of events befitting legends of gods and men of old, an unforeseeable calamity struck at the critical time of implementing the system in earnest; With roughly 140 000 people dead, over 44% of all urban areas of Tokyo destroyed by fire, and some 73,8% of households affected, the Great Kanto Earthquake of 1923 (*kantō daishinsai;* 関東大震災) was a disaster in its purest form.

Virtually all the old and extremely dense commoner's districts of Tokyo were completely levelled. The looser old *samurai* districts were less affected, but there was no mistaking the fact that the herculean task of rebuilding the capital was at hand, and almost every other public project was dropped. Ever since *Tokugawa bakufu,* Tokyo had been the centre of attention for the central government, but with the Great Kanto Earthquake, Tokyo was in one stroke made the centre of attention of everyone. While the rebuilding plans were indeed made during late Taisho-period, the rebuilding is a story for the next period.

Even though Taisho is often heralded as the short but glorious period of democracy in Japan, life was still extremely frugal, and this would not change for decades. While Japan was politically extremely active and colourful during this period, the strong central government was still keeping the Japanese nation on a



Desolation of Nihonbashi and Kanda seen from the Roof of Dai-ichi Sogo Building, Kyobashi; Photo by Osaka Mainichi Newspaper in September 15th, 1923 (Wikimedia Commons)

very tight leash. The Meiji government had already been merciless towards dissidents, and if anything, the Taisho government only tightened the noose. During the inter-war period all Japanese were encouraged to work hard, spend little and live frugally, a lifestyle that the commoners had been familiar with for centuries. These ideals of the broad and crowded lower layers of Japanese society are presented perhaps the best by Miyazawa Kenji (宮沢賢治) (1869-1933), a poet who was very fond of the rural agrarian life, and spent his later years in Northern Japan, living together with the farmers. The cold summers are an old expression for years of bad harvest and famine;

"Unyielding, to rain
to wind, to gale
never giving in to heat of Summer, to snow or hail
body without want,
mind without desire
irking, provoking, offending others, never!
but silently smiling for ever and ever
Each day, four bowls of brown rice,
some vegetables, and miso, that will suffice
in all,
for others, the highest regard
for self, though, none at all
watching, listening, understanding
and thence, never forgetting
in the field, in the shade of pines,
in a small thatched hut he lies
Should a child lay sick to East,
go, and nurse him back to health
Should a mother stagger to West,
go, and relieve her of her sheaf of rice
Should someone lay dying to South,
go, and give them brave solace
And should a fight brew to North,
plead them cease their useless, worthless waste
in times of draught, shedding tears of sympathy
in summers cold, walking in turmoiled empathy
a wooden doll to all,
without praise,
without blame
All that
I want to become."

雨ニモマケズ
風ニモマケズ
雪ニモ夏ノ暑サニモマケヌ
丈夫ナカラダヲモチ
慾ハナク
決シテ瞋ラズ
イツモシヅカニワラッテヰル
一日ニ玄米四合ト
味噌ト少シノ野菜ヲタベ
アラユルコトヲ
ジブンヲカンジョウニ入レズニ
ヨクミキキシワカリ
ソシテワスレズ
野原ノ松ノ林ノ蔭ノ
小サナ萱ブキノ小屋ニヰテ
東ニ病氣ノコドモアレバ
行ッテ看病シテヤリ
西ニツカレタ母アレバ
行ッテソノ稲ノ束ヲ負ヒ
南ニ死ニサウナ人アレバ
行ッテコハガラナクテモイヽトイヒ
北ニケンクヮヤソショウガアレバ
ツマラナイカラヤメロトイヒ
ヒドリノトキハナミダヲナガシ
サムサノナツハオロオロアルキ
ミンナニデクノボートヨバレ
ホメラレモセズ
クニモサレズ
サウイフモノニ
ワタシハナリタイ

Ame ni mo makezu (雨ニモマケズ) by Miyazawa Kenji, ca. 1933 (translated by the author)

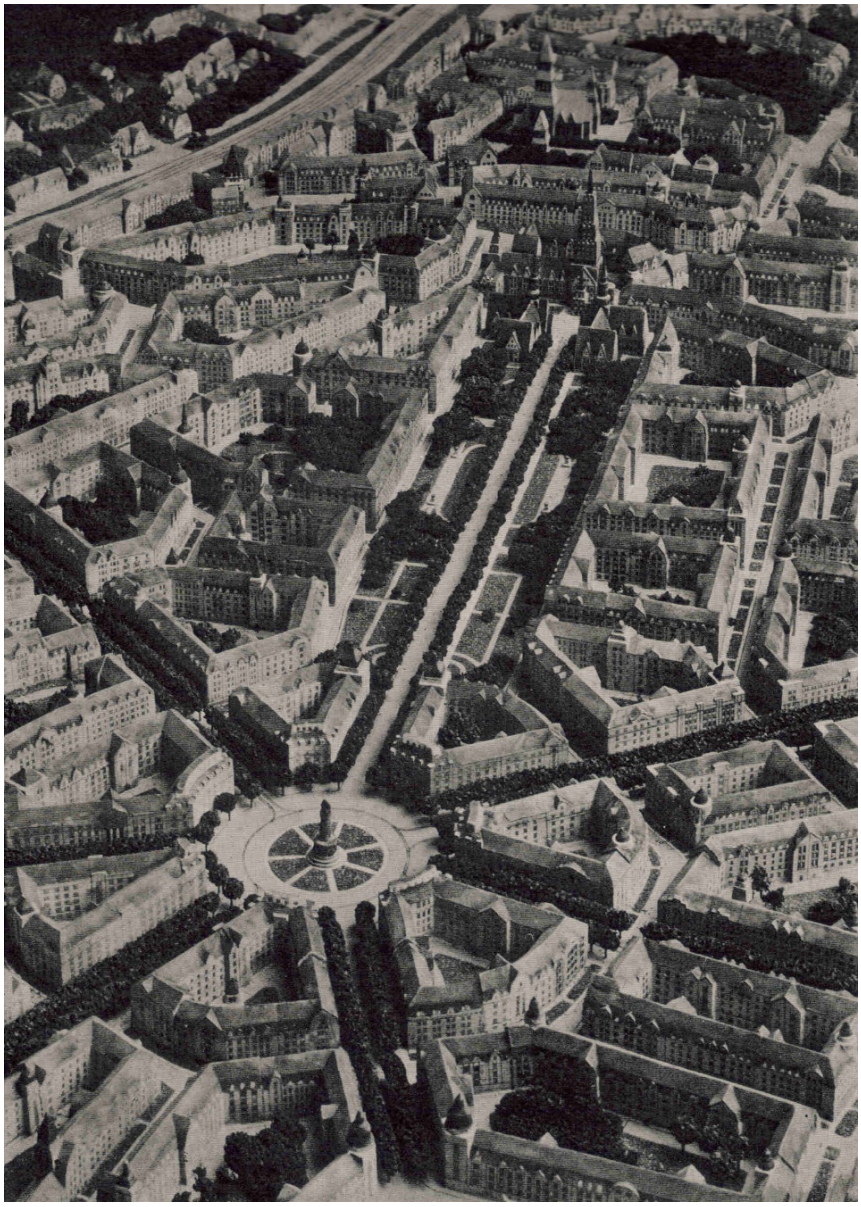
The echo of these words! They resound with the quintessentially Japanese ideals of frugality, ascetism, humility and self-sacrifice, ideals that were proclaimed by the very *samurai* during the Edo-period. Even today, these ideals are only a scratch away from the surface, a powerful testament to the long-lasting effect of a culture long past. What makes the poem peculiar however, is not only their resounding Japanese character, but that they can, to large extent, be applied to Finns just as well. The Finnish ideals of living in the woods, to stay away from the spotlight, to manage with little, not to show emotions, nor to trouble others as well as the immediate readiness to help others are clearly present in the poem as well. Even the cold summers eerily bring the many Finnish famine years to mind. We cannot know for sure what life was like then, but it must not have been easy.

Helsinki in 1907, Mariankatu 22 to 28, photo by Brander Signe HKM, © Helsinki City Museum (www.helsinkikuvia.fi)

Meanwhile, a major event in Finnish planning was about to transpire, but it had its roots a little bit in the past, in the efforts of a young man by the name of Lars Sonck (1870-1956) at the turn of the century. Greatly inspired by the writings of Camillo Sitte (1843-1903), Sonck vigorously argued in 1898 that Helsinki was desolate, insensitive and uninspiring, and that it much deserved a new look. In almost instant response to his article, architectural competition for Eira and Töölö districts was organized, Sonck won the second prize, and in one stroke a new generation of architects emerged, displaying a fresh wind of planning surfacing (Sundman, 1991). Next, in 1901, Sonck attacked the Finnish small towns, stating that *"a good deal of the proverbial drunkenness of the small town can be blamed on the dismal appearance of these linear villages"* (Sundman, 1991). Campaigning for better environments, Sonck produced many plans for public and private sector alike during the 1900's, constantly arguing for more organic, sometimes even medieval forms in 'Sittian' fashion (Obase, 1997b).

One of the architects of the new rising generation for whom Sonck paved the way was Eliel Saarinen (1873-1950), the author of the famous Munkkiniemi-Haaga plan of 1915. Junior to Sonck by only 3 years, Saarinen agreed with his message, and after gaining experience from international competitions, Saarinen drafted the Munkkiniemi-Haaga plan during 1911-1915. That plan was a true amalgam of modern design ideals; Howard Ebenezer's (1850-1928) Garden Cities of Tomorrow, Wagner Otto's (1841-1918) 1911 plan for Vienna, even the grandeur of Georges-Eugén Hausmann's (1809-1891) renovation of Paris was apparent in the magnificent proposal (Obase, 1997b). The plan was equally ambitious in vision and size as well; The plan projected an increase of population from 60 000 to 170 000 in an area of 860 hectares, of which 37% was designated as green- and park areas (Obase, 1997b). Furthermore, Saarinen actively mixed all social classes in different districts of the plan.

Haaga-Munkkiniemi Plan of Greater Helsinki by Eliel Saarinen in 1915, (Wikimedia Commons) ©



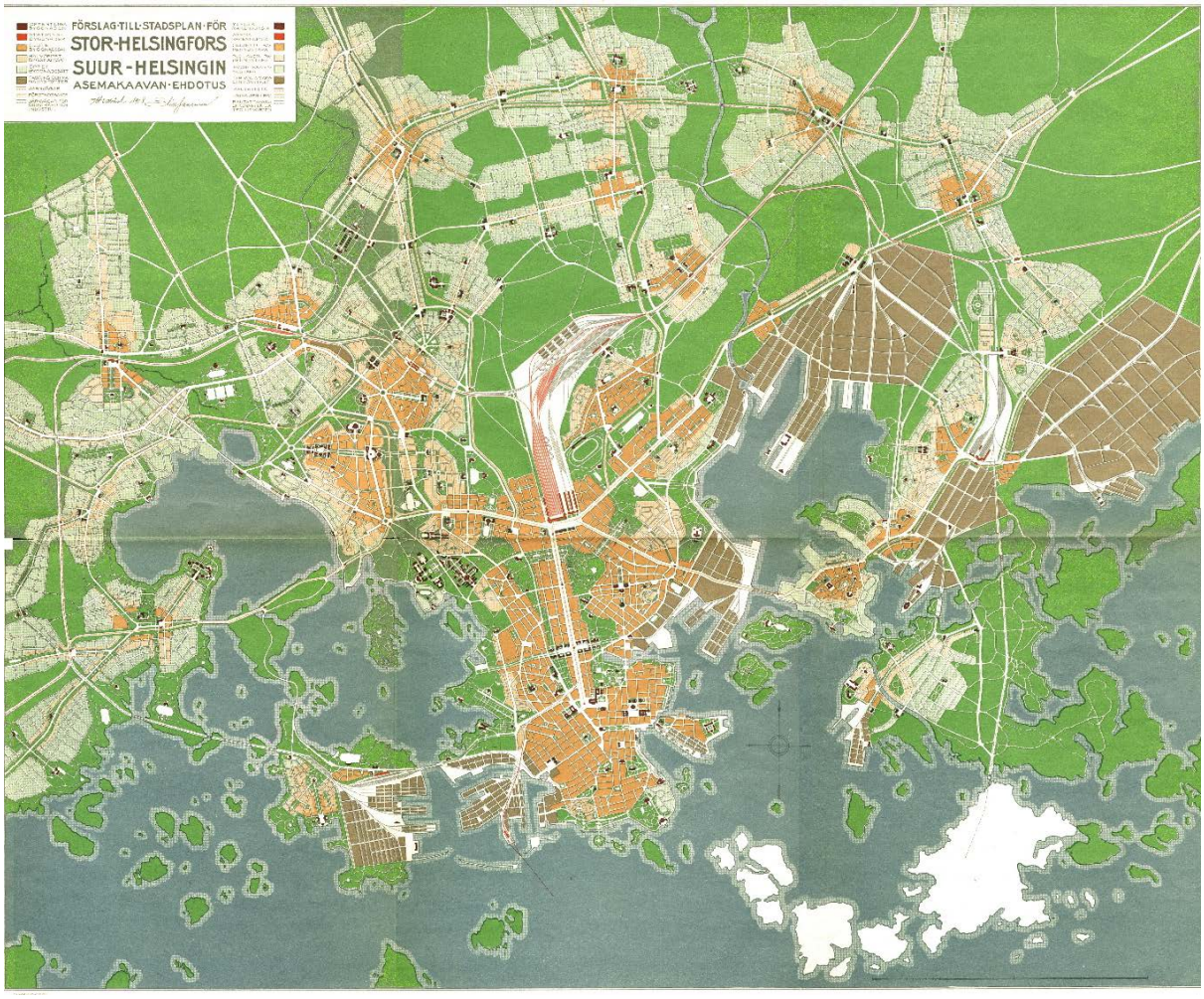
Photograph of the Haaga-Munkkiniemi Plan model, photographer unknown, photo in 1915, (Wikimedia Commons)

The plan was, as all plans of similar magnitude and vision usually are, criticized quite heavily. Biggest problems were that the ambitious plan only reached out to northwest, and that it reached outside city lands, meaning that private development companies would certainly have had profit as their priority. The only way Helsinki could have achieved such quality and grandeur would have been by realizing the plan by itself, and that would have required some serious capital to buy the private lands. Consequently, only small portions of the plan were ever realized. Saarinen was not done with the idea yet, however.

Nevertheless, Finland was simultaneously amid arguably the biggest upheaval imaginable. The February Revolution of 1917 had come and gone, and Finland had been left vulnerable, without a strong autocrat to protect its autonomy. Negotiations with the provisional government were going on, but as it turns out, February Revolution was only the beginning. 1917 had another revolution in store for Russia; the Bolshevik revolution, which took place in the beginning of November. This is somewhat odd, as the event is also known as Red October, or October Revolution. The reason for this is the fact that Russia was still using the old, Julian calendar. The Bolshevik Revolution plunged Russia into a long civil war, that would end in 1922 with the creation of Soviet Union.

For Finland this was the final straw. Pehr Evind Svinhufvud (1861-1944) had returned from exile in Siberia after the February Revolution, and he wasted no time in forming a Senate on 27th of November, which took on the task of drafting declaration of independence as quickly as possible. Parliament of Finland accepted the proposal on 6th of December, which today is the Independence Day of Finland. Svinhufvud quickly asked the neighbouring countries to recognize the independence of Finland. In response to this request he was advised to first ask the ringleader of the Bolshevik Revolution, and the newly made leader of Russia, Vladimir Lenin (1870-1924) to recognize the Finnish independence. Svinhufvud went to meet with Lenin, who agreed, albeit somewhat reluctantly. Common theory is that Lenin planned to annex Finland after he had first taken Russia properly into control. The smell of civil war was strong everywhere in Eastern Europe.

And indeed, Finland followed Russia's example in 1918, and plunged into civil war itself. The war was fought between the "Red" working class, and the "White" farmer 'elite.' These two groups held strongly opposing views about the Finnish independence; the reds would have wanted Finland as an autonomous Grand Duchy, not as an independent state, while the white elite was practically behind the declaration in the first place. In January of 1918 the White Guard were given orders to quell the unrest, which sparked the short civil war, which was in fact one of the bloodiest of its time, leaving roughly 36 000 people, 1,2% of the population dead. Worse still, most did not even die on battlefields, but instead either wasted away in prisoner camps, or were executed by firing squads.



Greater Helsinki Plan by Eliel Saarinen & Bertel Jung in 1918 (www.timomeriluoto.kapsi.fi) ©

Confusion ensued, and in a colourful series of events, Finland was barely inches away from becoming part of the German Empire as a monarchist protectorate. A king had already been elected, but as the German Empire collapsed in the German Revolution of 1918-1919, the still uncrowned king gracefully declined the throne, and Finland was made a democratic republic in one fell stroke. In hindsight, Finnish independence was caused by two wars, and neither included Finland in almost any way; The First World War, which ultimately destroyed both the Russian Empire, as well as the German Empire, and the Russo-Japanese War, which greatly undermined the Russian Empire, practically setting it up for the collapse.

It is during the bloody Civil War that Eliel Saarinen created the follow up to his Munkkiniemi-Haaga plan together with Bertel Jung (1872-1946); The Greater Helsinki Plan of 1918. The magnificence of the Munkkiniemi-Haaga plan has now been expanded to the whole Helsinki area, complete with several satellite towns of roughly 10 000 inhabitants each, and connected to Helsinki via railways (Obase, 1997b). Naturally, the civil war threw every projection made for Helsinki into disarray, and even if there had not been a civil war, problems similar to the ones already encountered in the execution of the Munkkiniemi-Haaga plan would certainly have prevented the plan from being implemented.

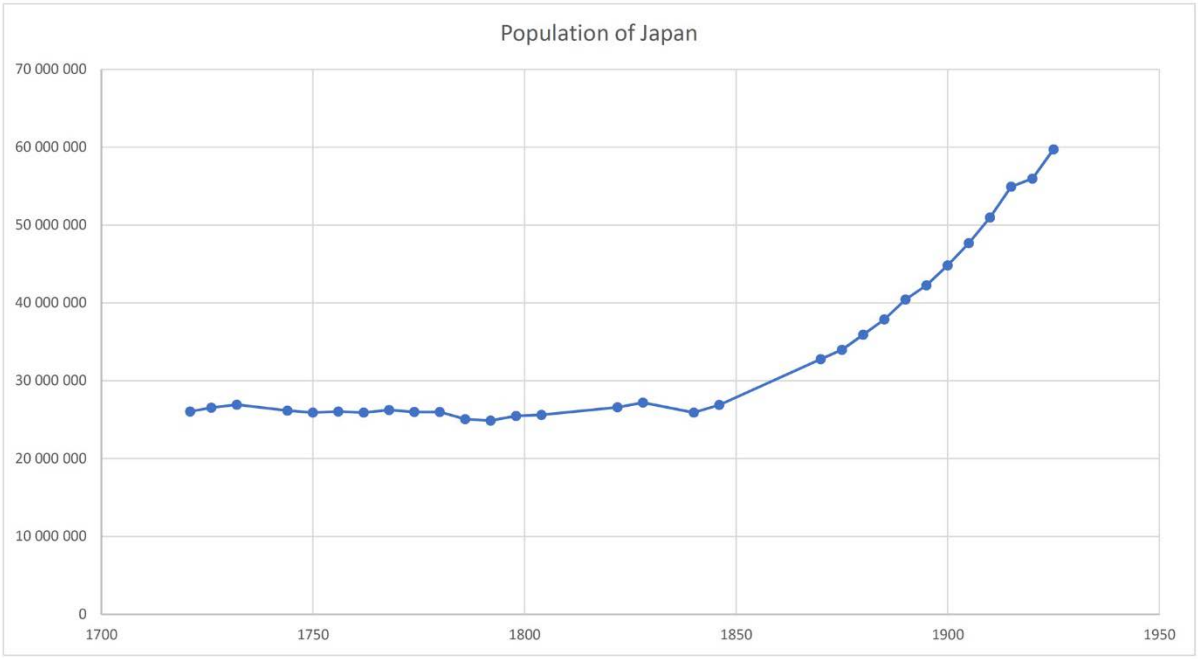
Nevertheless, the Greater Helsinki plan was a significant event in Finnish planning, as it greatly shook the urban traditions. Even though almost none of it was ever realized, the vision contained in it woke up the planners of Finland. The axial vistas, the rich and affluent boulevards, the satellite towns, the green belt around the city proper, the railways, everything in the plan had the air of magnificence in it. While almost none of the plan was implemented as is, slowly through the years the themes presented in the plan have surfaced again and again, and slowly many of the ideas have taken root.

Following the Finnish civil war, and incidentally the Greater Helsinki Plan as well, problems with the urbanization start to become more and more apparent. Prices for housing in the centres of urban areas had been steadily increasing as the building code became ever stricter inside the city limits. Consequently, the immigrants from rural areas could no longer afford this level of housing. However, as there was no planning law in force back then, free market reigned outside the city limits. Lands surrounding the urban areas tended to increase in value, and thanks to earlier legislation of 1864, plots could be subdivided freely. Further, there were no regulations whatsoever, architectural, safety, structural nor hygienic, that could have been applied to buildings outside the city plan, which in turn could only be applied to city owned lands. The city plan was *everything*, and outside it the only limiting factor was landownership. Based on the Japanese experience, it is not hard to see where these aspects are leading.

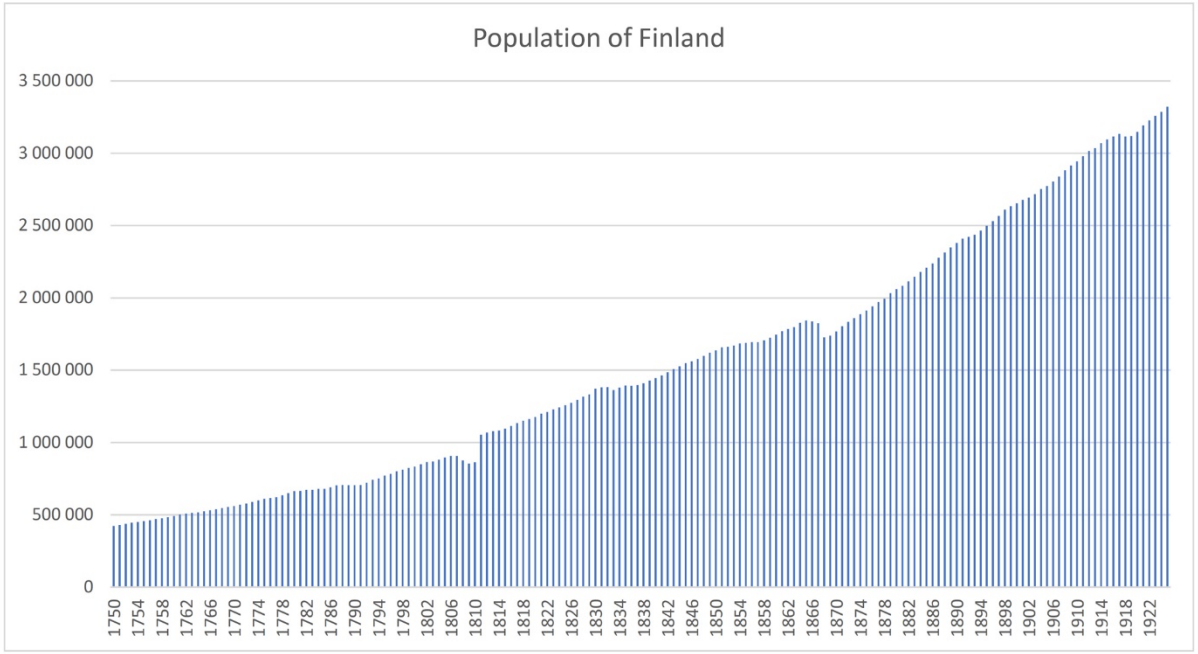
Consequently, private landowners were able to make good money by building substandard tenement housing. Without any guiding plan, these areas quickly fell into disarray. Unplanned urban development escalated quickly to veritable shantytowns in the outskirts of the big cities, especially Helsinki, Turku, Tampere, Oulu and Viipuri. This worrying development lead to a decision to implement a new Planning Law. A lawyer by the name of John Rafael Uggla (1870-1954) began a careful study of the Swedish planning law, that had been decreed already in 1907, stating that *"We must assume that building development in future will to no small extent take place on privately owned land; and this inaugurates a new and important phase in the history of Finnish urban development"* (Sundman, 1991). Preparations for the law required over a decade of work, and the law was finally presented in 1931, coming into power in 1932. In the meantime, inspired by Saarinen's visionary approach and bold plan, architectural competition suddenly rose to be the main forum of urban planning. This development, together with the preparatory work for the new planning legislation, can be considered the birth of public planning in Finland.

And so the Taisho-period ended. In the age of empires, Finland had suddenly found itself independent and untied to any of the great Empires, witnessing the simultaneous fall of two right next to it. Enduring one of the bloodiest civil wars of the age, Finland saw the problems it was faced with, and was pulling its act together fast. In turn, what had already started in Meiji-period Japan only escalated during the Taisho-period: In 1873 the population of Japan was around 35 million, with roughly 14 million engaged in farming and forestry, whereas in 1925 the population was already almost 60 million, with the same 14 million engaged in farming and forestry (Sorensen, 2002). Corresponding numbers for Finland were a population of about 1 768 800, with 7,5% (ap. 133 000) in towns or boroughs in 1870, and population of 3 462 700 with 20,6% (713 000) in towns or boroughs in 1930 (Sundman, 1991). While Japan has seen a near tripling of urban population during that time, it was Finland's turn to experience the near *sextupling* of urban population.

And once again, we shall put an end to the chapter with a curious link between Japan and Finland. Almost instantly after Finland declared independence, Gustaf John Ramsteadt (1873-1950), a famed linguist in Altaic languages, was given orders to act as Finland's first envoy to Japan. This assignment lasted from 1920 to 1929, and during this time Ramsteadt held considerable influenced in Japan. A frequent lecturer in Tokyo Imperial University, he influenced many thinkers in Japan, modernist and conservative alike. For example, one Miyazawa Kenji, whose famous poem *"Ame ni mo makezu"* the reader should by now be familiar with, was so moved by Ramstedt's Esperanto speech, that he decided to learn the language as well.



Population of Japan, 1721-1925, data from (Statistics Bureau of Japan)



Population of Finland, 1721-1925, data from (Statistics Finland)

Showa (1926-1989)

Like all the periods before, Showa-period too has a major event around which everything revolves; The Second World War of 1939-1945. It is in the shadow of this war that most of the Showa events take place. In several ways, the effects of the war are still affecting the Finnish and Japanese nations, allies and losers in the great conflict. Because the war is such a major event, this chapter is divided into two parts. The first part examines the inter-war period, and the events that led up to the war. The second part examines the effects of the war, and the events that followed the reconstruction.

Inter-war period (1926-1945)

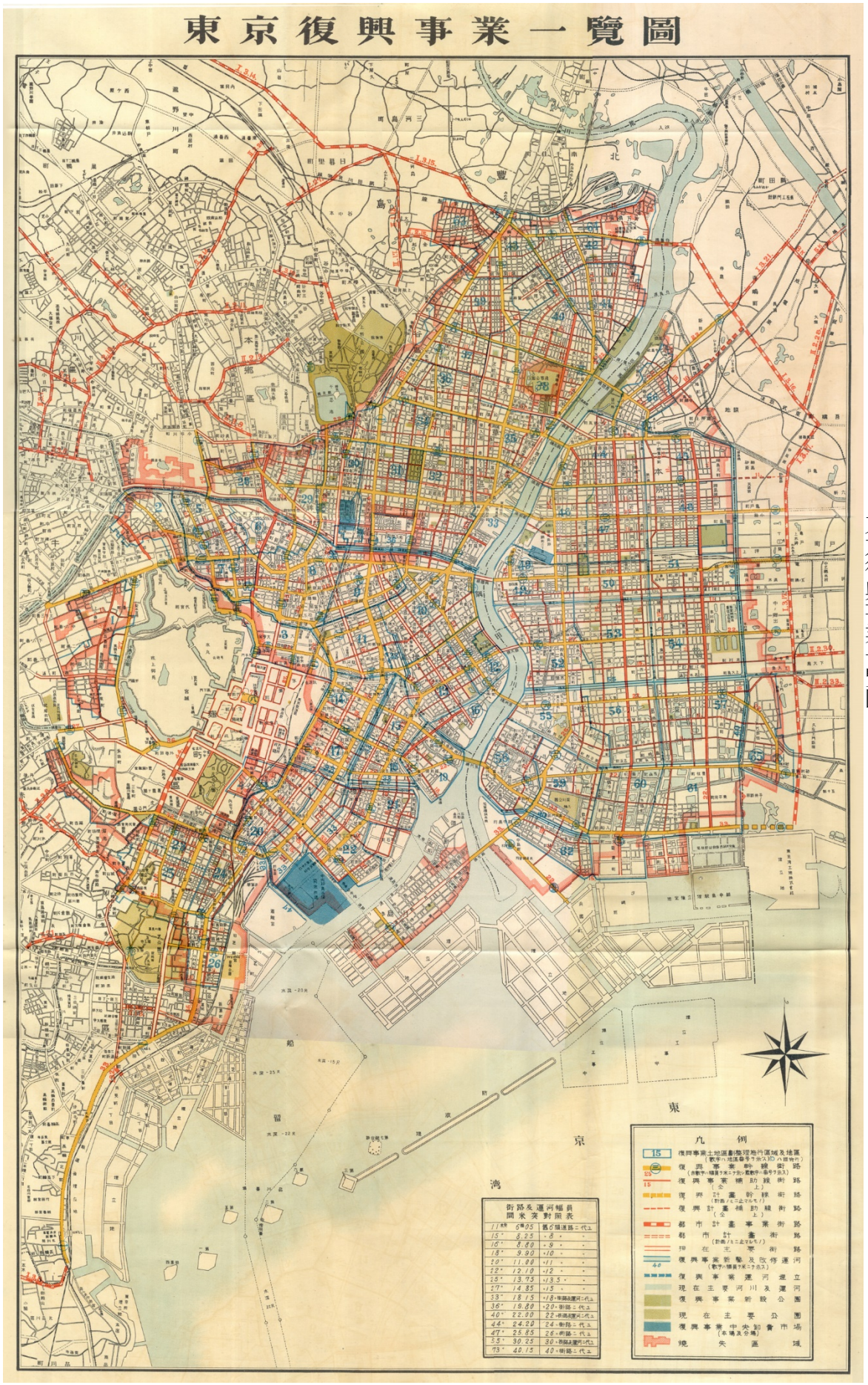
The Great Kanto Earthquake of 1923 had left Tokyo in ruins at the end of the last chapter. Gotō Shinpei (後藤新平) (1857-1929), a former Home Minister, and mayor of Tokyo between 1920-22, is called back and appointed the Home Minister just one day after the Earthquake (Sorensen, 2002). While being the mayor of Tokyo, Gotō had sponsored a long-term plan of modernizing Tokyo not entirely unlike the Saarinen Greater Helsinki plan. Unsurprisingly, Gotō saw the destruction as a golden opportunity, and proposed several lavish plans that would have utilized western planning experience extensively. Among his other goals, Gotō specifically wanted to limit independent and private rebuilding activities so that the road network could finally be rationalized. The plans had timescales of decades with budgets that went up to billions of yens. Finally, a plan with a budget of one billion yen was selected in October 1923.

Unfortunately, the budget was severely cut down to 470 million yen (roughly equivalent to 2,3 billion dollars in 2015, and over 1% of the entire GDP of 1924 Japan), first by the Finance Ministry, and then the Diet. As the cabinet that had appointed Gotō fell in January 1924, Gotō also lost the Home Minister portfolio, and had to continue working on the reconstruction plan outside the Home Ministry. However, before his departure he was able to pass new legislation that allowed Land Readjustment to be used as the main tool in the reconstruction. Prior consent of landowners would not be needed to start a project under this act, nor would loss of plot land less than 10% need to be compensated at all. Almost all the destroyed areas were divided into 65 different land readjustment projects, and reconstruction was started in stages.

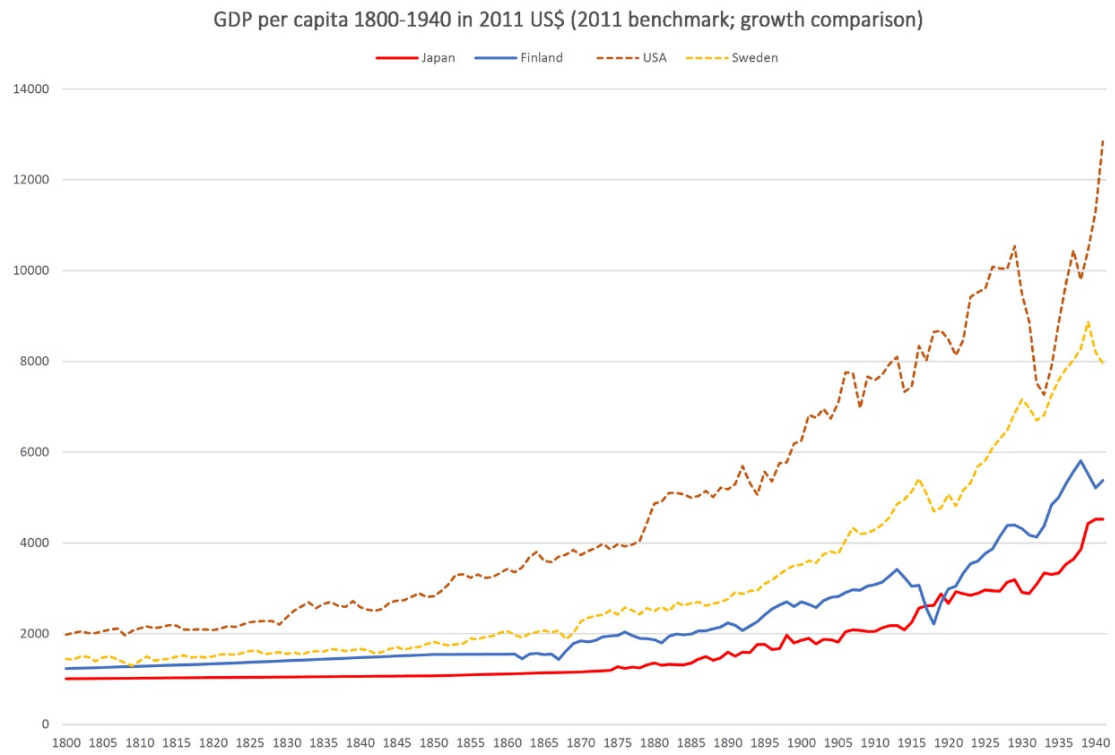
Naturally, the fact that land readjustment projects were initiated without consent, and especially that no compensation was paid over most lands lost caused much opposition and hatred within the ranks of landowners. The act was argued unconstitutional, and the very term “urban planning” became a malediction. The fact that these projects did much public good, even though they were greatly undermined by the budget cuts and Gotō losing the portfolio of Home Minister, did practically nothing to alleviate the anger of landowners.

Part of this is explained by the economic collapse of the age. After the First World War, economic growth was already suffering, and the Great Kanto Earthquake was a major setback, forcing the entire nation to concentrate on the reconstruction of the capital. In 1927 Suzuki (鈴木), the third largest *zaibatsu* (財閥; financial conglomerate) in Japan went bankrupt together with 20 other banks (Ushio, 2005). The man who was called upon to fix the situation was General Tanaka Giichi (田中義一) (1864-1929). Hints of fascist future were already apparent in his actions, as his medicine of choice was increased army budget and focus on industry, agriculture and colonies. In 1928 he started hunting for leftists, and thus the short Taisho democracy was coming to an end. The proverbial last nail to the coffin was the crash of Wall Street in 1929, after which Japan fell into regression. From there on it was a parade of fascism all the way until the end of the war.

東京復興事業一覽圖



Tokyo Reconstruction plan, 東京復興事業一覽圖, 1923, (http://www.greatkantoearthquake.com/)

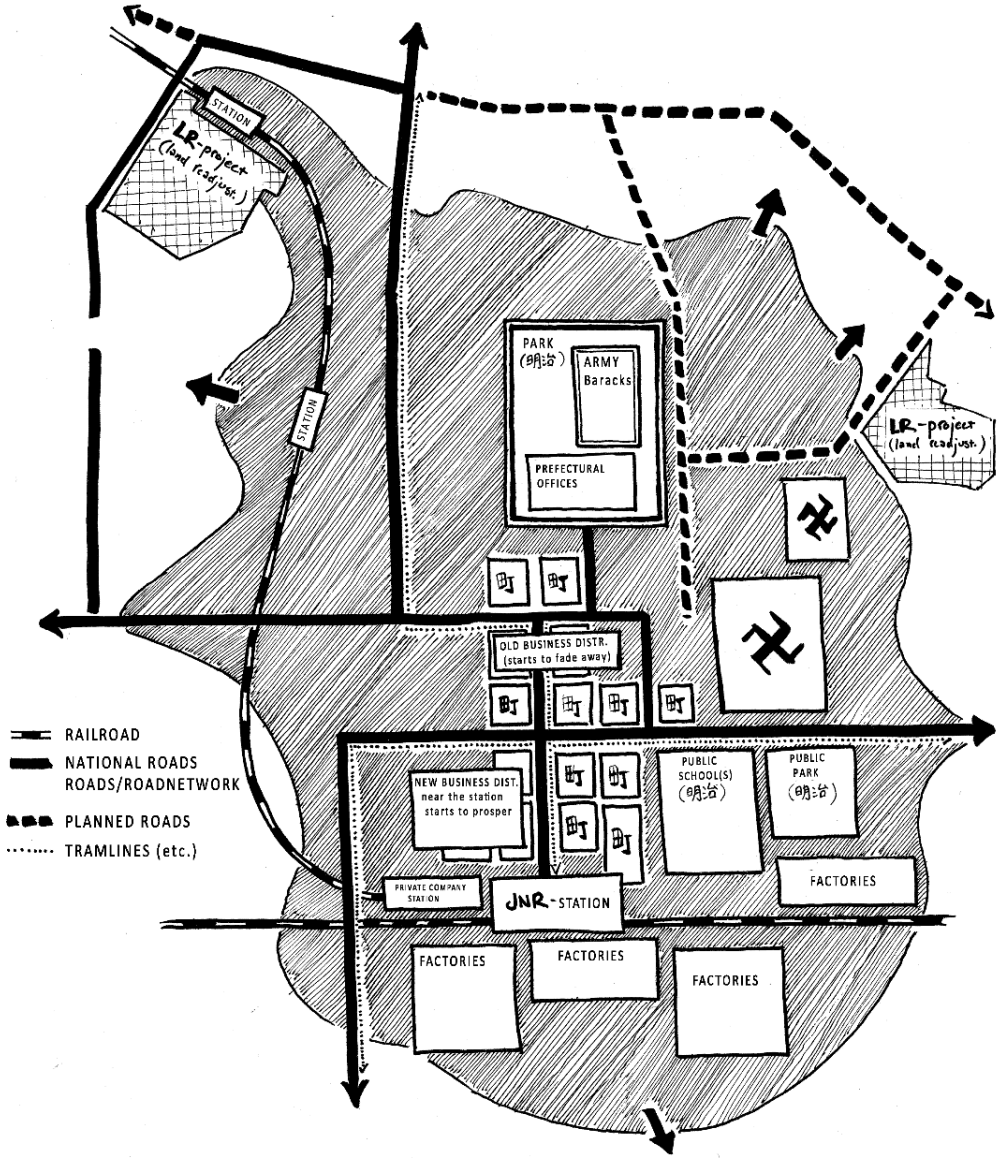


Development of GDP per capita in Japan, Finland, Sweden, Russia & USA until 1940, in 1990 international dollars; data from (Maddison project, 2018)

Inter-war Japan was thus extremely colourful, with all manner of special interest groups active across the entire spectrum of population, from men to women, from young to old, and more importantly, from the lowest to the highest echelons of the society. Life was not easy for almost anyone, and the central government was actively campaigning and encouraging frugality among the Japanese in the inter-war period (Ushio, 2005). "*Rich Japan, poor Japanese,"* as a popular saying went. Regrettably, the common folk were already very much used to this kind of cruel treatment, and that legacy of the *Tokugawa bakufu* is arguably more crucial than anything else in shaping the extremely hierarchical culture of Japan.

The autobiographies of two famous soldiers of the Imperial Navy, Hara Tameichi (原為一) (1900-1980) and Sakai Saburo (坂井三郎) (1916-2000), are a powerful testament of this extreme culture. Their stories provide us with an inside look to the Japan of the age. Both men were from small rural villages, and thus witnessed the hardships of agrarian Japan in earnest. Both men describe their parents toiling the land from dawn to dusk without ever complaining. Curiously, both men were also descendants of *samurai*-families. Even though the *samurai*-class had been abolished during the Meiji Restoration, both were made very much aware of their duties as *samurai*. I leave the description of 1929 Tokyo to young Sakai Saburo, the smartest child in his village, who has just left his home village in Southern Japan to try his hand in the best *middle schools* of Tokyo:

> *"[…] Everything in Tokyo bewildered me. I had never known a city larger than Saga* [佐賀]*, with its 50,000 people. The milling throngs in Japan's capital were incredible, as were the constant turmoil, the noise, the large buildings, and all the activities of one of the world's greatest centers. I was also to find that Tokyo in 1929 was a stage of fierce competition in every field; not only were new graduates competing bitterly for jobs, but even young children had to fight for the comparatively few openings in the select schools. […]"*
>
> Saburo Sakai, 1957, p. 3



Japanese castle towns during the inter-war period, redrawn by the author from (Sorensen, 2002)

As Sakai soon noticed, there was a big difference between living a harsh frugal life, and life dictated by the law of the jungle. The Japanese expression for this kind of situation is perhaps even more accurate; *jyakuniku kyōshoku* (弱肉強食), meaning quite literally *"the weak are meat the strong eat."* That was the kind of world the capital of Japan was, and in certain ways still is. Young Sakai had to experience this the hard way, and after he started falling behind the rest of the class in a mid-level school, he was sent back to Saga (佐賀), his home village, ashamed and badly humiliated. The pressure that the poor and populous nation placed on its power structures was immense.

The Japanese city has again developed. The central commercial district has grown more towards the railway station. Tramlines have become abundant, and new arterial roads are constructed. Land Readjustment projects have entered the picture, and while they have finally provided the sub-urban sprawl with some semblance of order and planning, they are also few and far between. The urban sprawl itself is spreading fast in all directions as public transportation allows for longer distance commuting. Number of factories is steadily rising on the far side of the tracks and on the urban fringes.

The new aspect in the picture is the private railway that extends towards upper right. As private companies could build only local railway lines after the nationalization of almost all railroads, that is

exactly what the private entrepreneurs did. Usually the private company would either fit its own station inside the city station next to the national railways, or build a private station very close by, and then extend a local line directly away from the city. However, the business model of these companies was not centred on ticket sales, but instead on land development. As the development regulations were still minimal, the companies financed themselves by first buying as much cheap land as possible in the fringes, then constructing the railway and developing the areas near the stations, and then selling or renting that land at greatly increased price.

Developments like these were called *"garden cities"* (*den'en toshi*; 田園都市). Although modelled after the satellite cities of *Garden Cities of Tomorrow*, their Japanese counterparts were somewhat different in implementation. The western idea of garden cities was that a string of wholly independent small towns would circle the big city. In Japan however, these satellite cities consisted basically of housing alone. There were almost no shops, only the bare minimum of services, and usually no jobs available to the residents. Without the holistic composition the new satellite towns soon fell prey to the increasingly aggressive land speculation and rampant urban development. The initial plan area around the station would usually be well designed, but in a tune similar to the Finnish shantytowns of 1920's, the moment the project area ended, the rational organization collapsed as well.

One curious aspect of Japanese urbanism were the *chōnaikai* (町内会), the neighbourhood associations. Another throwback to the Edo-period society, these associations were created as an important final link between the imposing central government and the urban commoners. Based in the old village societies where the village shared responsibilities for taxes, order, maintenance of public infrastructure and social security under the leadership of the "village elder," the central administration was again able to ignore the ever-increasing issues of urban problems among the common folk. While the way these associations were utilized by the central government was not very admirable, they have proven to be one of the strongest and most attractive aspects of Japanese urbanism. Sorensen writes that *"about 80 per cent of chōnaikai leaders were the heads of enterprises located within the ward, including heads of factories, shop owners, doctors and dentists, precisely the most desirous of a clean, safe orderly environment."* (Sorensen, 2002).

It is unclear whether the idea behind these associations were a spontaneous development of civil consciousness, or government machination. Once the initial idea was uncovered, the number of *chōnaikai* skyrocketed. In 1897 Edo there were but 39 associations in the entire city, but on the eve of the earthquake there were already 452, meaning over tenfold increase in one generation. In 1930's the central government began to spread the idea across the country, and in 1940 they were made compulsory throughout the country (Sorensen, 2002). It must also be understood that whether of government machination or local origin, in the end these associations were one-way organizations. They received orders from above and had basically no way of requesting help or reporting issues upwards. It is in the memoirs of Hara Tameichi that we see the extent they were utilized during the war (back then the duty of a Japanese wife was still to wholly attend the family and the household);

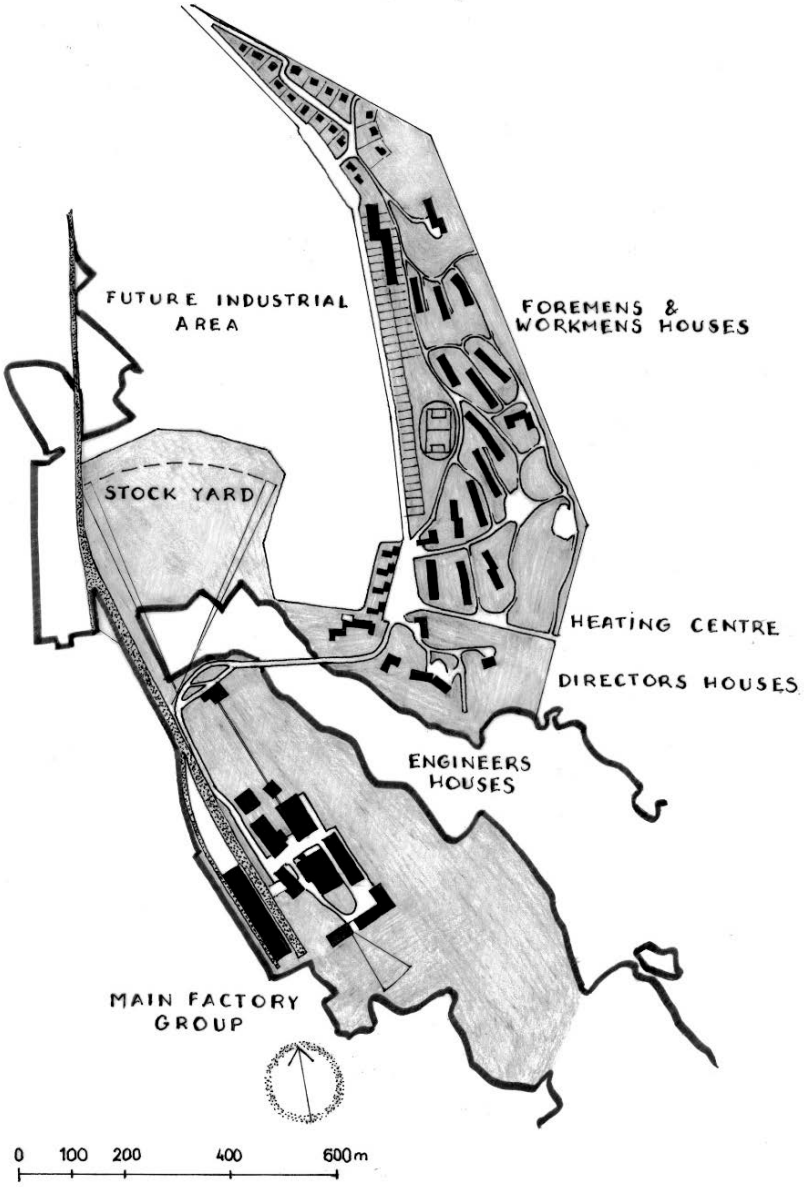
> *"[…] Despite the pleasure of being home, there really was no forgetting the war. One day we had planned a picnic, but my wife was unable to go with us. She had to attend a meeting of neighbourhood wives to discuss household brass and iron collections for the use of the military. The children and I had our picnic and a long walk in the pine-clad hills. On our return from the picnic I was vexed to find that my wife was not yet home. My daughter explained, "Do not be angry. Mother has to attend many long meetings these days, Remember, Daddy, this is wartime." […]"*
>
> Hara Tameichi, 1961, p. 156

Meanwhile, it is time for possibly the most influential architect in Finnish history to make his entrance; Alvar Aalto (1898-1976). In 1920's Aalto was a young architect and, together with most Finnish architects, was working in style known as Nordic classicism according to their classical education. This style was a frugal version of the earlier eras, simplicity its leading characteristic. Even further, unlike the earlier flashy and decorative styles, Nordic classicism was also well adaptable to wood construction due to its simplicity (Sundman, 1997). Thanks to the rural nature of Finland's population, wooden housing would retain its position as the main type of housing until long after the war. Incidentally, it was in residential housing, especially single housing, that Nordic classicism made its greatest and most visible mark.

Aalto's revolutionary vision realized towards the turn of the decade however, and he became a proponent of Functionalism with his first internationally famous work, the Vyborg library (1927-1931). The work began as classicist, but after numerous revisions, ended up being almost a manifesto to functionalism. While Aalto is certainly best renowned for his architecture and furniture, like most famous architects of the time, Aalto was also active in the field of Town planning. Together with P. E. Blomsteadt (1900-1935) they heralded modernism into Finland. The message was that everyone, regardless of rank or social standing, should have an easy access to nature just like they always had throughout Finnish history. In Aalto's plans we see a deconstruction of the classic urban structure. Housing was organized so that nature was abundantly available and in view from every household of every building. This came to be known as the forest town, of which Sunila town plan is one of the first examples:

At the same time, after much deliberation Finland was finally ready to introduce the new Town Planning Law of 1932 known as *Asemakaavalaki*. With this law the municipality could make plans that reached outside city limits, and thus regulate development on privately owned lands. This law was based on a similar law introduced in Sweden in 1907, and it copied many of its technical aspects (Sudman, 1991). Among these were economic regulations between the community and the landowners, so that a better standard of building could be achieved. However, the most interesting thing in the law, which is also a direct copy from the Swedish planning law of 1907, was a mystifying addition that has shaped Finnish and Swedish architecture and planning ever since:

> *"[…] In 1884 a motion was put before the Riksdag describing forcefully and in detail the drawbacks of the current system, and recommending new legislation. The proposer, Moritz Rubenson, was a secretary of the Stockholm City Council and for many decades a prominent figure in local government. He appears to have been particularly interested in planning and building issues.*
>
> *[…]*
>
> *During its passage through the Riksdag an important addition was made to the law. On the initiative of a private proposer a provision was included, whereby plans could even prescribe the details of development on individual properties, such as height, number of floors, etc. It is no exaggeration to describe this alteration, which transformed the town-planning law from a law that regulated from a law regulating streets and plots into a genuine planning law, as perhaps the most important step in the history of Swedish planning legislation. And yet it passed almost unnoticed. It is doubtful whether the proposer recognized the full import of his own suggestion. Nor do we know how he got the idea or where it came from. […]"*
>
> Thomas Hall, 1991, p. 180



Sunila sulphate cellulose mill, town plan by Alvar Aalto in 1936, plan redrawn from (Sundman 1991) by the author

While the law was undoubtedly initiated by the appearance of the shantytowns outside big cities, the fact that it was decreed by the esteemed architects and lawyers of Helsinki, it is no wonder that Helsinki is also well represented in the law. While the origin of the mystifying addition depicted above is a mystery, it was used to unify the streetscape of Helsinki; whenever land was bought from the city, it came with a precondition that the coming building façade needed to adhere to certain rules. Later, this law would be revised as the "Construction Law" (*Rakennuslaki*) in 1956, and again in 2000 as "Land Use and Construction Law" (*Maankäyttö ja rakennuslaki*).

When the law was finally introduced, the shantytowns and working-class suburbs had only deteriorated further. Just like in Japan, many of the public services, sewers, water supply, traffic, etc. had been dealt with minimal effort, and largely left to the residents themselves to figure out. Unlike the Japanese who had long traditions of self-service and were used to this kind of urban culture however, the rural Finnish were utterly helpless in the unorganized suburban sprawl. The companies that held the land were basically all bankrupt, and consequently the land they held was bought by the cities. This large public acquisition of formerly private lands is a significant step away from the dangers where Japanese cities have constantly found themselves in time and time again (Obase, 1997).

Finland was in the midst of great upheavals on every other front as well; The Finnish economy was resting on quickly growing population. The population exceeded 2 million in 1879, 3 million in 1912, and in 1930 it was already 3 462 700. One reason for this explosive growth was the fact that child mortality was constantly decreasing thanks to ever increasing quality of healthcare (Vahtola, 2003), although the effect was basically limited to one generation. More importantly, famine was effectively defeated even among the poorest of the poor in the 1920's.

Industrialization was also in good shape, although the First World War made somewhat of a dent in the growth. Finland had to change trading partners almost constantly, with England, Germany and Soviet Russia playing the leading role in turns. Sweden and USA were also playing important roles. Especially paper- and wood-industries grew quickly, just like they had before, and the growing industries demanded ever more machinery, which in turn helped the metal industries forward. Logistics also needed to adapt to the increased production quickly, and both railroads, ships and highways developed quickly: During the First World War, 4/5 of the Finnish trading fleet capacity was sail-based, but in 1939 that number had fallen to only 9%. Likewise, as Railroads steadily proved their usefulness, by 1920 there was already roughly 4000 kilometres of rails, and 2000 kilometres more were laid between 1920-1939. (Vahtola, 2003)

The big change in highway culture took place with private cars. In 1915 there were roughly 31 000 kilometres of highways, but horses were still the main means of transportation. There were still hundreds of taverns and thousands of horses in use. 20's and 30's changed this in a heartbeat, as the number of cars in use changed dramatically; In 1922 there were some 1100 private cars, and 500 trucks in use, whereas the corresponding numbers were 22 900 and 10 700 in 1930, and 26 200 and 18 000 in 1938. The main catalyst in this development was the postal service. (Vahtola, 2003) World was getting smaller fast, as the distances between places were quickly shrinking in terms of time.

Population and occupational distribution in Finland, 1840-1980

Population			*Population by industry (%)*			
Year	*Total*	*Percentage in towns and boroughs*	*Agriculture and forestry*	*Industry*	*Service industries*	*Others*
1840	1 445 600	5,8	81,7	4,3	4,1	9,9
1850	1 638 900	6,2	81,0	4,3	4,3	10,4
1860	1 746 700	6,3	80,4	4,8	4,5	10,3
1870	1 768 800	7,5	78,1	5,1	4,8	12,0
1880	2 060 800	8,5	77,1	6,5	5,7	10,7
1890	2 380 100	9,9	74,7	8,0	6,2	11,1
1900	2 655 900	12,6	69,7	10,8	7,7	11,8
1910	2 943 400	14,7	65,8	12,1	7,6	14,5
1920	3 147 600	16,1	64,2	14,6	9,9	11,3
1930	3 462 700	20,6	58,2	16,4	11,9	13,5
1940	3 695 600	26,8	51,4	21,0	15,8	11,8

Finnish population and occupational distribution between 1840-1940, adapted from (Sundman 1991)

Nevertheless, Finland was still very rural, with only about a fourth of its population living in urban areas, and over half of the population working in agriculture and forestry. Houses were still largely made with the old log-house techniques, both in the countryside, as well as in the cities. Having learned from the devastating urban fires of the previous century, precautions were taken against spreading of fires, including the widening of streets and change of roofing material from wood to tile (Suikkari, 2007). Concrete also made its entrance in construction industry, and during the 20's, apartment buildings also began appearing even for the working classes, culminating in the above-mentioned forest-town developments.

Culturally speaking Finland was unifying very efficiently, as the spreading of associations, shops, advertisements and education, together with the circulation of books, news, trade and people steadily increased throughout the period (Vahtola, 2003). It could even be said to be a birth of a "general" culture. One key factor in this regard was the general spreading of education. Even though the building of a comprehensive network of grade schools took a long time, this ailment was resolved through an old practise of wandering teachers, *"kiertokoulu"* as it was called. More advanced education was also a top priority for the new nation, and somehow science ultimately found its way into the hearts of the Finnish people. The serious effort to civilize the nation was without doubt one of the most important developments of the period that has had lasting effects to this day. Quality of life was improving on all fronts as well, including food, clothing, housing, leisure and celebration among others (Vahtola, 2003). A very important but often unnoticed act was enacted in 1922 and revised in 1939, which was the decree for yearly vacations.

Further, Finland of the time was small and young, a fledgling nation in a big and unstable world. The main concerns of inter-war period Finland were obviously related to the gradually deteriorating condition of world politics. Unlike Japan, which was an empire, and a major player, Finland could only try to manoeuvre the rapids as skilfully as possible, in which Finland was relatively successful. The League of Nations was born during the inter-war period, but its influence was ultimately very weak, and it could not prevent nor sanction Japan, Italy or Germany for their military advancements into Manchuria in 1931, Abyssinia (Ethiopia) in 1935 and Rhineland in 1936 respectively.

Slowly but surely the World fell into flames. Soviet Union wanted to re-annex Finland back into the motherland, and Finland fought bravely against a far superior enemy to maintain its independence and to protect the Nordic nations. This valiant effort was widely applauded, and to some extent supported by Sweden and Norway. Japan on the other hand was quickly falling into fascism, and in the aftermath of the second Sino-Japanese war of 1937, and Japanese advancement into Indochina, United States imposed a full embargo on Japan. This was the last straw for the Japanese who were already infuriated by demands to limit their armed forces, and to pull out of China and Indochina; Against better judgement of many of the most esteemed men in the Military and politics, Japan attacked Pearl Harbour without any prior declaration of war on December 7th, 1941. What followed is summarized by Andre Sorensen in a tone far better than I could imagine achieving;

> *"[…] Japan's deepening involvement in the China war after 1931 and the gradual descent into total war meant that increasingly little time, energy, or resources were devoted to urban planning after the mid 1930's. After the American capture of Saipan island in 1944 regular bombing raids were commenced against Japanese cities. The use of incendiary bombs against cities densely built of wood and paper was devastating, and most Japanese urban areas were consumed in the resulting fires. Japan's population in cities over one million (at that time only Tokyo and Osaka qualified) dropped from 12.4 million in 1940 to 3.9 million in 1945 as a result of the destruction of the housing stock and mass civilian evacuations. Surrender was finally announced after the almost complete obliteration of two cities southwest, Hiroshima and Nagasaki by atomic bombs in August of 1945. Defeat in war marked the end of an era, and the occupation and post war reconstruction […] began a new one."*
>
> Sorensen, 2002, p. 150

The war consumed everything, and the Japanese city of the pre-war era would not return. The city that was born in the reconstruction, and the resulting economic development would create a new kind of city. An idea of what the Japanese cities might have looked like before the war, and how they changed with the progression of the war and the general opinion is provided by Sakai:

"[…] It was a long time since I had walked on my home soil. I had no idea of what conditions would be like in Japan, but I was totally unprepared for the shock of Yokohama. We landed in the Yokohama harbour early Saturday evening. There was little purpose in reporting that night to the hospital, and I went into the city, where I could take a taxicab to my uncle's house in western Tokyo.

These people – they had absolutely no idea of what war really was like! I gaped in astonishment at the bustling crowds, at the bright signs and lights. I could not believe the sounds which met my ears, of thousands of voices, of laughter, and unconcern. Didn't they know what was really going on down in the southwest pacific?

[…] The crowds of people in their light and colourful summer clothes stopped outside the stores and the corners where the radios trumpeted. Every time the announcer mentioned another major defeat over the enemy loud cheers and cries resounded through the streets.

The nation was drunk on false victories. It was hard to believe that a destructive war was going on. In the stores I saw only certain commodities were being rationed, but that the daily necessities of life were available in abundance. […]"

[…]

"[…] During my assignment to Yokosuka, I visited Tokyo often. In the eighteen months of my absence, the capital city had changed. The color and gaiety were gone. People no longer laughed as quickly or as heartily. The streets were dreary and lifeless. The people moved along, heads bent, intent on their own problems. The "Warship March" no longer generated enthusiasm. Too many sons of these same people, too many husbands and brothers and uncles and nephews, were never to come home again.

But Tokyo still did not truly reflect the war, although the shouting was over. The stores had run short of commodities, and strict rationing was now in force. People braved the wind and the cold in long queues, waiting for bowls of steaming broth. The homeland remained untouched, however, except for that one single raid back in 1942, the daring flight of Doolittle's bombers, which raced over the city and fled for China. Tokyo and all our cities had remained unviolated by the thunder and the screaming pieces of steel from American bombers. […]"

[…]

"[…] The test pilot assignment afforded me the opportunity once again to visit with my family. I left Yokosuka early one Sunday morning to travel to my uncle's house, passing through Tokyo on the way.

During my absence, the city had deteriorated further. Although no bombings had occurred since the Doolittle attack of 1942, the city appeared drab and lifeless. Most of the stores were closed, their windows empty. The significance of this was clear. There were no goods to sell, and the owners were away, working in war plants. The few stores that remained open hardly resembled the colourful and well-stocked establishments I once knew. Few goods were on display, and for the most part these were crude substitutes. The Allied blockade of Japan was hurting pinching the national stomach severely.

Often I passed official demolition crews tearing down long stretches of buildings and private homes. Hundreds of men ripped and broke up buildings in order to clear wide firebreaks in the heart of the city, in anticipation of the bombings which all Japan feared. The families being forced from their homes stood in small groups on the street, watching with sorrowful faces as the labor gangs ripped their homes to pieces. […]"

Saburo Sakai, 1957, p. 168-169, 195-196, 242-243

Post-war period (1945-1989)

Although both nations fought on the losing side, the effects of the war were quite different for the two nations. Japan hung on to the bitter end, and only surrendered unconditionally on 15th of August 1945 after enduring frankly inhuman punishment. During this period of stubborn resistance all the big Japanese cities were bombed and burnt to the ground. The American forces occupied Japan and began reforming the country into a democratic and peaceful one. Thus, most of the reforms were aimed at eliminating any means to achieve a totalitarian government. As the war-sick nation was looking towards change, these reforms were received well, even though they were effectively handed down from a military dictatorship.

Finland fared somewhat better, as it managed to pull out when the situation started to seem hopeless. With the inevitable demise of Germany in sight, Finland began suing for peace, and Soviet Russia did not pursue unreasonable terms because it wanted to get in on the game for Europe as quickly as possible. In effect, Finland would retain its independence, but it would have to pay huge war reparations, around 300 million dollars of worth at the time, and concede large areas in the East. Unlike in Japan, virtually all the cities, especially Helsinki, were saved from the Russian bombers via good strategic thinking, and appalling quality of the Russian bombers.

Both nations thus needed to start major construction projects. Japan needed to rebuild homes for almost 10 million Japanese who had been left homeless by the flames of war, and to repatriate millions of Japanese nationals stranded outside of Japan, as Japan had to relinquish all areas other than the mainland and Okinawa. While Finland did not need to do so much rebuilding, Finland too had lost some major areas in the east, and over 11% of the population, over 400 000 of them refugees, were in dire need of new residences (Vahtola, 2003). Further, large portions of the industrial capacity, including about one third of Finland's energy production were left in the conceded areas, and thus lost. This called for unprecedented developments in both post-war Finland and Japan.

Nihonbashi, Tokyo 1946 - Allied Occupation Period, Kinouya Archives (Wikimedia Commons)

1st of May in Helsinki, 1945, Siltasaarenkatu, photo by Väinö Kannisto, © Helsinki City Museum (www.helsinkikuvia.fi)

Under the American occupation, the Japanese constitution was rewritten from square one, starting with the dissolution of sovereign power from the Emperor to the people. The Emperor was allowed to remain as the representative head of state, but without any political power whatsoever. Next, Japan was denied armed forces altogether, and universal suffrage was granted to women, who had been fighting for the right to vote and participate in politics for over half a century. While the diet was allowed to stay bicameral, the peerage system was dissolved and both houses had to be democratically elected, thus destroying the tradition of the old *genrō*-statesmen.

Reforms were also instituted in economics, education and local governance, as all of the above were considered to have fostered the nationalistic spirit (Sorensen, 2002). The huge *zaibatsu*-conglomerates were considered to have been too deeply involved in military affairs before the war, and to have held too much economic-muscle to be healthy for a democratic country. Education was decentralized to avoid the central administration having nationalistic influence on the young. Right to form labour unions, as well as to strike and bargain were finally legalized, and the local government leaders, city mayors and prefectural governors, were made elected positions instead of appointed ones. A key moment in Japanese governance occurred in December 1947, when the Home Ministry was abolished for apparent reluctance to relinquishing the centralized power it had held over local governments ever since its creation (Sorensen, 2002). Consequently, three new ministries took its place; the Ministry of Labour, Health and Welfare, the Ministry of Construction, and the Ministry of Local Autonomy Agency.

However, while most reforms were welcomed, and did indeed have very positive effects, some of them did not turn out quite like the occupying forces were hoping for. A major problematic issue was the self-determination right of property, which was decreed in article 29 of the new constitution in the following manner (Ushio, 2005); *"The right to own or to hold property is inviolable. Property rights shall be defined by law, in conformity with the public welfare. Private property may be taken for public*

use upon just compensation therefore" (Sorensen, 2002). The intention was that through the concept of "public welfare" such institutions as urban planning could be brought to bear. What the occupying forces did not understand was that the Japanese society was so used to extreme inequality, that the idea of "general well-being" was never understood as prosperous environments for the citizens (Ushio, 2005). Instead, in the coming age of economic growth it was understood as a tool to facilitate economic growth in any way possible, meaning that the citizens would have to suffer whatever came their way, be it a highway, or a huge factory. In other words, the polar opposite of what was intended.

This development was tied to another big reform driven by the occupational forces; the big Land Reform. Under this reform about one third of the national farmlands, 1 128 000 hectares of rice-land plus 790 000 hectares of dryfield land, were redistributed from non-farming landlords to owner-cultivators; in case of leased lands, everything above one hectare (4 hectares in Hokkaidō), and in case of owner-cultivated lands, everything over 3 hectares was redistributed (Sorensen, 2002). This development changed the very way land was viewed, as it completely broke larger landholdings outside cities, a development which would show some very unfortunate side-effects in the decades to come. Roughly 2,5 million farms, 40% of the total, were less than 5000m^2 in size (Sorensen, 2002). Further, granting the farmers ownership of their farms only served to cement the sense of property, and thus solidified the patchwork quality of the system even further. In some places farming did not really change at all from the Edo-period before 1970's, meaning that the view of Japanese rural countryside had not changed practically at all between Edo-period, and post-war Japan.

Planting Rice in Japan, ca. 1890, hand-coloured albumen print by Kimbei Kusakabe; (Wikimedia Commons)

Japanese farmers around 1914-1918, photograph by Elstner Hilton; © A.Davey (Flickr) (Wikimedia Commons)

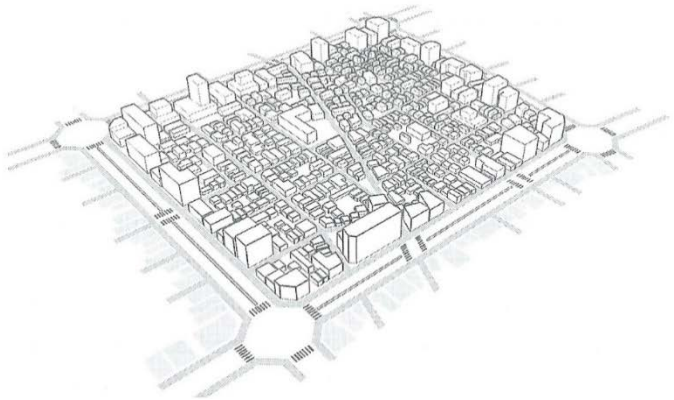
Before anything else, Japan needed to tackle the massive housing shortage, and with the cities levelled it seemed like the perfect chance to reorganize the cramped and structurally medieval rural cities. While Tokyo had been restructured time and time again, thanks to the iron grip of the central administration, rest of Japan's urban areas, especially smaller cities, had remained nearly medieval in structure. Truly, Tokyo had been the sole centre of planning attention ever since the beginning of Edo-period, but with the local government reform, attention was suddenly directed outside of Tokyo first for the first time in Japanese planning history.

Unfortunately, the planning system of 1919 was unable to handle such massive pressure, as the virtually only tool available was still the Land Readjustment -system. The system itself had very few means to control development between the plots, or control development directly outside the area of the LR-projects. Even further, the post-war economic crisis forced the government-started LR-projects to be implemented with contribution-without-compensation of up to 15% of landholdings, a demand which caused serious friction between the people and the institution of urban planning (Ushio, 2005). The infrastructure network was repaired relatively quickly, and officially completed in 1949, but the rest of the planned LR-projects were heavily cut down so that the reconstruction could be declared over in 1959. The original total area of over 65 000 hectares of comprehensive LR-projects was ultimately cut down to roughly 28 000 hectares in 102 cities (Sorensen, 2002). Even the Building-Line system, the only real means of controlling the road networks, was abolished in 1950 with the introduction of "Building Standards Law" (*Kensetsu Kijun hō;* 建設基準法). It was replaced with much more simpler regulations that mainly aimed at minimum road widths, and little else.

An exception to the rule exists, and that is the city of Nagoya, which managed to stubbornly carry out almost the entire planned program over the course of over 40 years, the last projects finishing in the early 1990's. Financial cutbacks cut the plans down from 4 400 hectares to 3 450 hectares, but

nevertheless this was a major achievement when compared to the roughly 60% of completed projects on average outside of Tokyo (Sorensen, 2002). Part of this was thanks to the fact that Nagoya had been an avid supporter of the LR-method especially towards the urban fringe already during the inter-war period. Since there already existed a form of order in the chaos, it was possible to conduct the reconstruction in a piecemeal fashion instead of a massive upheaval of everything in one go. This is a powerful testament to the usefulness of LR-method over a long period of time in a well-encouraged environment.

Though the phenomenon can today be witnessed in other Japanese cities as well, Nagoya boasts probably the best examples of "superblocks" in Japan. The idea behind a "superblock" is that an area is surrounded by tall commercial buildings lining the bigger traffic-lanes, and as one moves inward, the structure shrinks in size and scale (Shelton, 2012). The straight roads start to wander and tangle, and the overall street-network can clearly reveal an ancient village where the urban fabric has swallowed them whole. Ancient temples can often be found in these kinds of urban retreats, a further testament to the old village-structures. Even when there is no discernible "superblock," this type of urban structure could well be said to constitute the main structural unit of today's big Japanese cities.



Concept of a Superblock; adapted from (Shelton, 2012)

Following the tradition already familiar to us, Tokyo was on a different scale from the rest of the Japanese cities in ambition, and this was not for a lack of trying on the part of the other cities. Almost third of the 65 000 hectares of planned reconstruction areas were in fact in Tokyo, an area which largely exceeded that of the destroyed areas. Also in accordance to tradition, the plans were exceedingly extravagant, modern and overtly ambitious, a form of planning on blank paper thanks to the extensive damage wrought by the American bombings. And to close the circle in traditional fashion as well, almost none of it came to be realized; only about 1 380 hectares of planned area, meaning 6,3% of the total, was completed (Sorensen, 2002).

The biggest problem in almost all cases of failure to complete a project proved to be the complicated landownership issues, and the general resistance to the government-originated LR-projects with very poor compensation (Sorensen, 2002). Even the GHQ of the occupational force resisted the idea of uncompensated expropriation, but the solution that was arrived at, promissory notes, was equally infuriating; the raging inflation made short work of the usefulness of any payments, immediate and future alike (Ushio, 2005). All in all, this detail made the whole notion of urban planning extremely unpopular in the post-war Japan, an idea that would change with the next generation, as the negative impacts of less regulated urbanism started to reveal themselves in earnest.

As was mentioned above, Finland had little need of rebuilding in comparison to Japan, but nevertheless, Finland had to build new homes for over 11% of its population, meaning roughly 425 000 people. This resettlement was mostly accomplished in rural areas, as large portions of the refugees

were farmers. To accomplish this, Finland also constituted a land reform of its own under the 1945 "Land Acquisition Act" (*Maanhankintalaki*) which ended up being the biggest in the entire Finnish history, redistributing almost 2,8 million hectares of land (Vahtola, 2003). While this did indeed change the entire structure of the farming communities, it had relatively little effect in the cities. Some small ad-hoc villages of standardized wood-construction randomly sprang up near the bigger cities during the 1940's and 1950's, but ultimately most of the refugee population settled in the countryside, either in farms of their own, or right next to bigger farms (Sundman, 1991).

An important development of the reconstruction was the creation of the Arava-system (*Asuntorakennustuotannon valtuuskunta;* "the Housing Finance and Development Centre of Finland") in 1949. This government-based system was created to provide cheap loans for the purpose of building affordable social housing. In the immediate years after the war, most of the housing production was concentrated in rural communities and farms in the form of single-family cottages (Sundman, 1991). The real effect of the Arava-system, the public investment in housing development however, would come in the following decades in the form of apartment blocks and planned residential suburbs (Koichi, 2005). For the time being, the Finnish spirit still yearned for the freedom of the woods, as is apparent in the writings of another important figure in Finnish planning;

> *"[…] Nature holds the greatest aesthetics of diversity, far beyond the abilities of man, who can but destroy it with imprudent action in a blink of an eye. Rock is easily broken, and yet it cannot be recreated artificially. Nature must be respected, and it should not be tampered with lightly. Only then can man and nature conjure brilliant work, that showcase the sense and educated nature of its nation, as well as of its creator. […]"*
>
> "[…] Luonto sisältää moninaisuuden suurimpia kauneusarvoja kuin mitä ihminen pystyy luomaan. Sen sijaan ihminen pystyy harkitsemattomalla toimilla yhdessä hetkessä pyyhkäisemään ne olemattomiin. Kallio on lyhyessä ajassa rikki räjäytetty, mutta uutta ei sen tilalle voi keinotekoisesti saada. Luontoa on kunnioitettava, ja siihen on kajottava varovasti. Silloin luonto ja ihminen voivat loihtia suurenmoisia töitä, jotka todistavat tekijänsä ja kansakunnan hyvää aistia ja korkeaa sivistystasoa. […]"
>
> Otto-Iivari Meurman, *Asemakaavaoppi*, 1947, p. 427-428 (translation by the author)

Otto-Iivari Meurman (1890-1994) was an exceedingly important figure of detail planning in Finland. In 1947 he published the *"Asemakaavaoppi"* (literally; "Detail Planning"), a book which gathered a wealth of European, especially German, planning theory from the early 20th century to the Second World War into one volume in Finnish. Meurman was an avid admirer of nature and high-quality planning, an affinity which is very apparent in his writing and expression. In fact, the term "Forest Town," which today feels like a quintessentially Finnish ideal, was originally invented as a form of critique against Meurmanian ideals, and to promote denser, more visionary urban schemes (Koichi, 2005). While the critique against 'shapeless' forest towns was very successful for a time, especially in the 1960's, Meurman's highly progressive writings from 70 years ago have proven resilient in the Finnish planning and urban traditions, sounding reasonably modern even today;

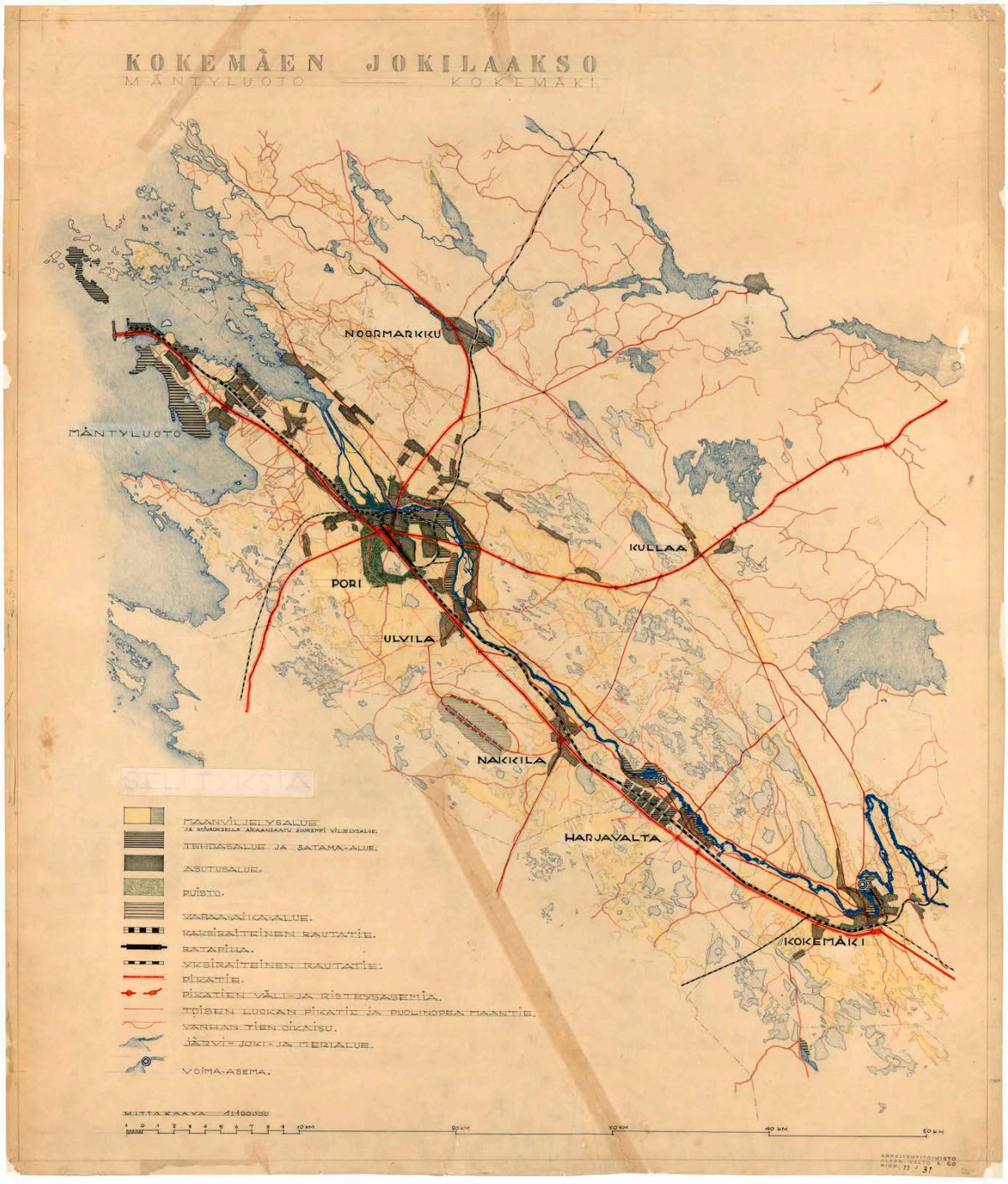
> *"[…] Modern detail planning strives to support realization of humane habitation, and in that sense to rationalize (and humanize) all land use of construction works to that end. American sociologist Lewis Mumford has greatly emphasized the social aspect of detail plan. Detail plan should lead to humane society, especially in terms of residency. […]"*
>
> *"[…] Nykyaikainen asemakaavatyö pyrkii luomaan pohjan inhimillisen asutuksen toteuttamiselle sekä siinä mielessä järkeistämään (ja inhimillistämään) kaiken rakennustoiminnan maan käytön sitä varten. Amerikkalainen sosiologi Lewis Mumford on korostanut voimakkaasti asemakaavoituksen sosiaalista puolta. Asemakaavan tulee johtaa inhimilliseen yhdyskuntaan, eritoten asumiseen. […]"*
>
> Otto-Iivari Meurman, *Asemakaavaoppi*, 1947, p. 9 & 13 (translated by the author)

Meurman also played a part in the planning of the famed garden city of Tapiola, but he later withdrew as other planners began invading his plans with apartment blocks (Koichi, 2005). Ultimately, Tapiola is an interesting example of Anglo-Saxon influence in post-war Finland, as it is basically a new town on British lines (Sundman, 1997). Land was acquired by "Finnish Population and Family Welfare Federation" (*Väestöliitto*), a public utility company, and the entire area of 230 hectares was planned with high-quality architecture *within* nature. The architects designing the different areas of Tapiola were given relative freedom in placing the houses and creating the urban structure. Thus, the buildings frequently break off from formal arrangements wherever the topography so requires, and there is little resemblance between different areas, as can be seen from the 1968 drawing below. Consequently, the urban structure than springs from the unplanned interplay with nature fell frequently under the same criticism that was directed against Forest Towns.

Tapiola general plan including building footprints, 1968; photograph © John Reps (digital.library.cornell.edu/), John Reps Papers, #15-2-1101. Division of Rare and Manuscript Collections, Cornell University Library. (edited by the author)

This opposition to Forest Towns was largely thanks to heavy American influence slowly but surely finding its way into Finland. One of the main proponents of the American way was Alvar Aalto himself. He had been working on the idea of *"An American Town in Finland"* during his stay at the Massachusetts Institute of Technology. After returning to Finland, Aalto led the Institute of Finnish Architects (*SAFA*) from 1942 to 1952 as its chairman. During this time Aalto created the first regional plan in Finland in 1942-43, which was for Kokemäenjoki river valley. Towards the end of the decade, Aalto also created a general plan for the city of Imatra. Both of these plans were privately financed, and thusly heavily Anglo-American in style, taking the entire area into consideration in terms of foreseeable (and profitable) future. Aalto's most detailed regional plan was the "General Plan for Lapland" of 1950-1955, an ambitious plan for the extensive Northern landscape that had been badly ravaged by the flames of war. With these plans acting as trailblazers, Regional Plan took form and was finally institutionalized as one of the official planning tools in 1958. However, by this time Aalto's original idea of an active guiding plan had transformed into a passive and protective plan. (Sundman, 1991)

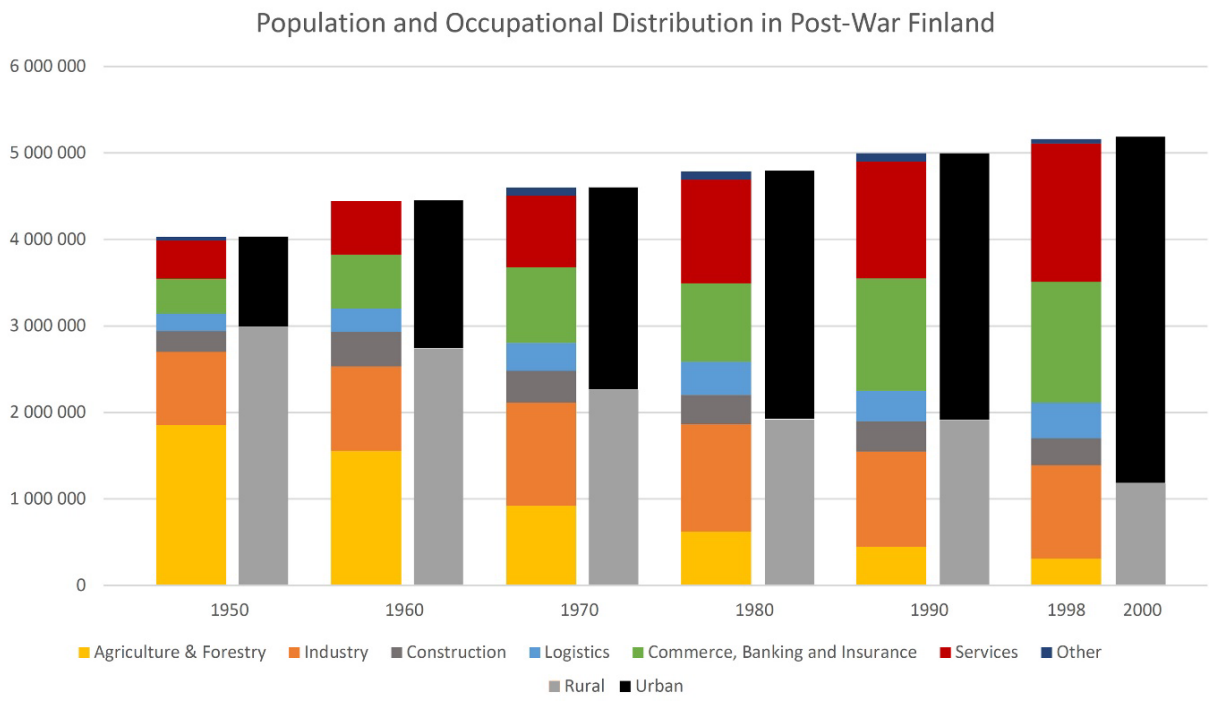
Thus, Finnish planning as it is known today was finally starting to take shape. Meurman's contributions to detail planning, and Aalto's contributions to regional planning are acknowledged, and slowly they also gained the support of the legal system. In 1952 Finland finished its rebuilding officially, as the last trainful of reparations shipped to Soviet Russia. The unofficial finishing touch to rebuilding were the Olympic summer games held in Helsinki the very same year, providing Finland a chance to show the world that it was back on its feet, and ready to face the future. Originally Helsinki was supposed to host the summer games of 1940, after Japan had forfeited the hosting following its involvement with China and Manchuria. Curiously enough, Japan had the exact same opportunity of showcasing a rebuilt nation a decade later with the 1964 Olympic summer games of Tokyo.



Regional plan for the Kokemäenjoki river valley, 1942-43 by Alvar Aalto, © Alvar Aalto Museum (navi.finnisharchitecture.fi)

There had been plans to revise the 1931 Town Planning Act ever since 1944, but the enactment of the new law took until 1959. The biggest change was that the building and land-use planning were brought under the same law, thus strengthening the harmony between the two (Sundman, 1991). While regional and master plans were somewhat weak before 1968, the municipalities were given monopoly in making the plans in 1959. This was a remarkable achievement, especially when contrasted with the Japanese experience. This however brought another problem to the forefront, the lack of regional governance in sparsely populated Finland. In the beginning of 1960's, there were 549 municipalities in a country of 4,4 million people, often leading to severe competition for the few available resources as virtually no form of mutual collaboration existed between the municipalities.

The 1960's saw a massive change in the structuring of the nation. The Finnish industry had sprung back into action, stirred by the need to pay the large and difficult war reparations, leading to development of advanced metal-industries. After the reparations had been paid, Soviet Russia naturally became an important trading partner, who required the high-quality products of the industries of Finland and paid back in raw materials and energy (Vahtola, 2003). Slowly but steadily the economy of Finland also revived, and suddenly Finland was experiencing record levels of urbanization in a western country; the urban population of Finland more than doubled between 1950 and 1970, and the growth did not slow down towards the closing of the century. Effectively, Finland moved from countryside to cities in just 50 years (Vahtola, 2003);



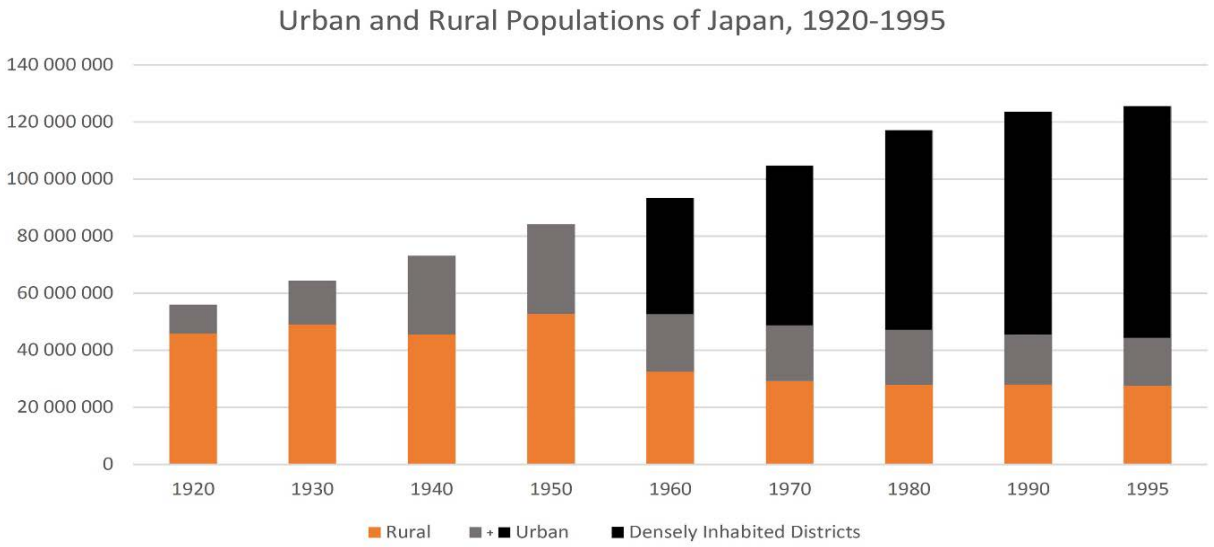
Occupational distribution & urban and rural population of Finland between 1950-2000, (data from Vahtola, 2003)

This energizing of urban areas and urban growth was they key that drives Finnish urbanism forward for the next 50 years. With the criticism towards the forest towns and visionary ideals of urbanism gaining foothold within the ranks of the next generation of architects, the gridiron plan made a second coming. Sundman even claims that one of the major reasons why the gridiron plan became so popular was that traditional Japanese architecture had become exceedingly popular among the young architects (Sundman, 1997). At the same time, the Arava-system mentioned earlier also started to play a major role in Finnish urbanization, issuing all manner of regulations relating to high-quality housing; room sizes, technical equipment, connections, common spaces, etc. However, the one thing

Arava could not influence was the outside appearance of the building, leading to a wave of *"prefabricated, inarticulate, slab block houses"* (Sundman, 1997). It did not take long for these to come under criticism, and already in the 1970's there was active moment against them.

An important development in Finnish urban planning came in 1968, when it became obligatory to draft plans for urban development. A decade earlier the planning monopoly had been handed to the municipalities, and thus regional and master plans became much more powerful tools (Sundman, 1991). It should also be noted that the long tradition of Finnish towns owning a significant portion of the land in the urban areas combined with the new exclusive right to making general plans was a near fool-proof combination of making sure that the city made profit whenever new plans were drafted (Obase, 1997). Even where the municipality did not own the land beforehand, it could buy the land while it was still undeveloped and thus cheap, and only then release the plan that promoted the area into high-value. Obase argues that this is the greatest difference between Finnish and Japanese urban planning; the ability to buy and hold the land *before* its price badly inflates (Obase, 1997). When compared with the Japanese story, his argument seems indeed convincing, as we shall soon see.

Already before the reconstruction of Japan was officially declared over in 1959, the signs of what was to come were in the air. The American occupational force was very concerned over the poor quality of Japanese infrastructure, especially over the road network. The dire lack of even the most basic commodities, and the looming famine also propelled the Japanese nation towards a very clear goal; to put the Japanese economy back in order. This became a mantra that was recited with impressive, almost religious vigour throughout the following decades. Economic development was the first and foremost of issues to be tackled in new Japan, the inheritor of the concentrated energies that had been set on Imperialism in pre-war Japan (Koichi, 2005).



Urban and Rural Population of Japan between 1920-1995 (Japan Population Census 1995; dataset from Sorensen, 2002)

If Finland moved from rural to urban areas in just 50 years, Japan did so even faster, as can be seen above. Part of the reason why the urban population rises so fast is administrative. Even today the official status of "City" is granted on a technical basis, meaning that with mergers of smaller municipalities the "City population" increased without any change in urban structure. To combat this phenomenon, the Densely Inhabited District -classification (DID) was invented in late 1950's. The definition of a DID is *"groups of contiguous enumeration districts with a population density of 4000 or more per square kilometre, and a total population of over 5000"* (Sorensen, 2002).

Date	Cities	Towns	Villages	Total	Notes
年月	市	町	村	計	備考
明治21年（1888）	－	71 314		71 314	

「明治の大合併」

近代的地方自治制度である「市制町村制」の施行に伴い、行政上の目的（教育、徴税、土木、救済、戸籍の事務処理）に合った規模と自治体としての町村の単位（江戸時代から引き継がれた自然集落）との隔たりをなくすために、町村合併標準提示（明治21年 6月13日 内務大臣訓令第352号）に基づき、約300～500戸を標準規模として全国的に行われた町村合併。結果として、町村数は約5分の1に。

"Great Merger of Meiji"

Together with the enactment of the modern local self-government system of "**市制町村制**" (*"municipal organization municipal system"*), differences between different local settlements (natural human settlements that were carried over from Edo-period) were to be reduced so that the scale and governance would befit the administrative objectives (handling of education, taxation, public works, relief, family register, etc.) as well. For this purpose, based on a suggestion of standardization of merger of Towns and Villages (Directive of the Internal Minister number 352, in 13th of June, 1888), the standard scale became roughly 300 to 500 households in the nationwide merger of towns and villages. The result was a reduction of municipalities to one fifth of the previous amount.

年月	市	町	村	計	備考
明治22年（1889）	39	15 820		15 859	市制町村制施行（明治22年4月1日） （明治21年4月17日　法律第 1号）
大正11年（1922）	91	1 242	10 982	12 315	
昭和20年 10月 (1945 October)	205	1 797	8 518	10 520	
昭和22年 8月 (1947 August)	210	1 784	8 511	10 505	地方自治法施行 （昭和22年5月3日　法律第67号）
昭和28年10月 (1953 October)	286	1 966	7 616	9 868	町村合併促進法施行 （昭和28年10月1日　法律第 258号）

「昭和の大合併」

戦後、新制中学校の設置管理、市町村消防や自治体警察の創設の事務、社会福祉、保健衛生関係の新しい事務が市町村の事務とされ、行政事務の能率的処理のためには規模の合理化が必要とされた。昭和28年の町村合併促進法（第3条「町村はおおむね、8000人以上の住民を有するのを標準」）及びこれに続く昭和31年の新市町村建設促進法により、「町村数を約3分の1に減少することを目途」とする町村合併促進基本計画（昭28年10月30日閣議決定）の達成を図ったもの。約8000人という数字は、新制中学校1校を効率的に設置管理していくために必要と考えられた人口。昭和28年から昭和36年までに、市町村数はほぼ3分の1に。

"Great Merger of Showa"

After the war, the establishment and management of the new upper school system, the establishment of municipal firefighting and police force, and new administration related to hygiene became responsibilities of the municipality. To achieve efficient handling of the administrative affairs, rationalization of the scale was deemed needed. According to the Showa 28 (1953) "Villages and Towns Merger Promotion Law" (3rd article; "Villages and Towns as a standard require some 8000 people or more."), as well as to the continuation of that, the Showa 31 (1956) "New Municipality Construction Promotion Law," the number of municipalities (villages and towns) should be reduced to roughly one third of the current number. For this purpose, the Masterplan for Promotion of Merger of Villages and Towns (cabinet decision in Showa 28 (1953), 30th of October) was devised. The rough number of 8000 people was seen to be the needed population for one school to be established and managed effectively in accordance to the new upper school system. From Showa 28 (1953) to 36 (1961), the number of municipalities was reduced to roughly one third.

年月	市	町	村	計	備考
昭和31年 4月 (1956 April)	495	1 870	2 303	4 668	新市町村建設促進法施行 （昭和31年6月30日　法律第 164号）
昭和31年 9月 (1956 September)	498	1 903	1 574	3 975	町村合併促進法失効 （昭和31年9月30日）
昭和36年 6月 (1961 June)	556	1 935	981	3 472	新市町村建設促進法一部失効 （昭和36年6月29日）
昭和37年10月 (1962 October)	558	1 982	913	3 453	市の合併の特例に関する法律施行 （昭和37年5月10日　法律第 118号）
昭和40年 4月 (1965 April)	560	2 005	827	3 392	市町村の合併の特例に関する法律施行 （昭和40年3月29日　法律第 6号）
昭和50年 4月 (1975 April)	643	1 974	640	3 257	市町村の合併の特例に関する法律の一部を改正する法律施行 （昭和50年3月28日　法律第 5号）
昭和60年 4月 (1985 April)	651	2 001	601	3 253	市町村の合併の特例に関する法律の一部を改正する法律施行 （昭和60年3月30日　法律第14号）
平成 7年 4月 (1995 April)	663	1 994	577	3 234	市町村の合併の特例に関する法律の一部を改正する法律施行 （平成7年3月29日　法律第50号）
平成11年 4月 (1999 April)	671	1 990	568	3 229	地方分権の推進を図るための関係法律の整備等に関する法律一部施行 （平成11年7月16日　法律第87号）
平成14年 4月 (2002 April)	675	1 981	562	3 218	地方自治法等の一部を改正する法律一部施行 （平成14年3月30日　法律第4号）
平成16年 5月 (2004 May)	695	1 872	533	3 100	市町村の合併の特例に関する法律の一部を改正する法律施行 （平成16年 5月26日　法律第58号）
平成17年 4月 (2005 April)	739	1 317	339	2 395	市町村の合併の特例等に関する法律施行 （平成16年 5月26日法律第59号）
平成18年 3月 (2006 March)	777	846	198	1 821	市町村の合併の特例に関する法律 経過措置終了
平成22年 4月 (2010 April)	786	757	184	1 727	市町村の合併の特例法に関する法律施行 （平成22年3月31日　法律第10号）
平成26年 4月 (2014 April)	790	745	183	1 718	-

Municipalities of Japan; (Ministry of Internal Affairs and Communications; www.soumu.go.jp) translation by the author

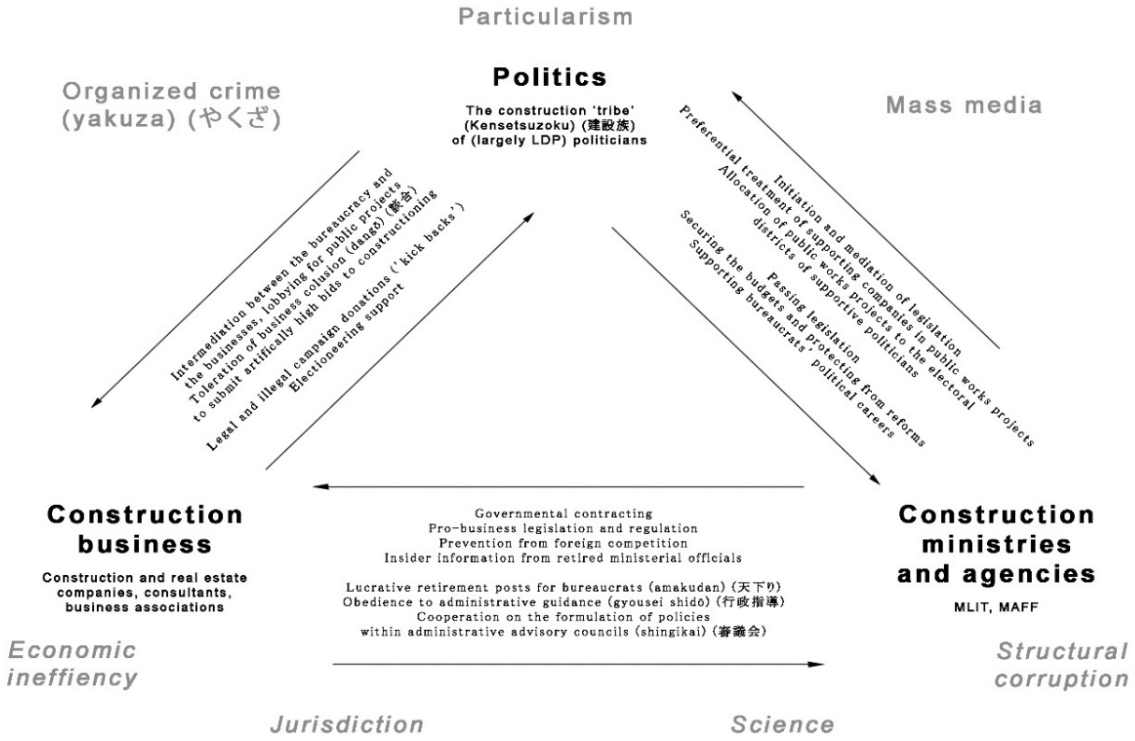
Post-war urbanization followed closely the patterns of the pre-war Japan, concentrating in the four major industrial areas of Tokyo-Yokohama (東京-横浜), Nagoya (名古屋), Osaka-Kobe (大阪-神戸) and Norther Kyūshū (北九州) (Sorensen, 2002). This development had its roots as far back as early Edo-period, when the *Tōkaidō* (東海道), the Eastern Sea Road, became perhaps the most important and travelled road in Japan, as most of the *daimyo,* the feudal lords, together with their massive retinues used it to constantly travel back and forth between Tokyo and their domains. The mountainous geography of Japan has always had this effect of constricting the movement from one area to another. Depending on interpretation, the *Tōkaidō* can be considered to begin from Sendai (仙台), some 300 kilometres north of Tokyo, passing through Nagoya and Osaka, and ending in the southern tip of Honshu, where the southernmost of the main islands, Kyushu, begins.

Soon a cycle appeared. The economic development started to utilize what little infrastructure there was, and the central administration did everything in their power to help these endeavours, bringing money and new infrastructure projects to these areas (Sorensen, 2002). Naturally, the energized areas attracted enhanced growth as well as more industries, which then attracted more public money and support from the central government. The amount of money spent in these infrastructure projects was simply staggering. In the beginning, this may have been a virtuous cycle, as the miracle of Japanese economic growth well stands for: Between 1953 and 1971 the average annual growth of Japanese GNP was 9,17%, and the conditions of the Japanese city certainly improved remarkably. However, the cycle soon turned dark, into vicious cycle of ever worsening residential conditions and environmental damage (Koichi, 2005) (Feldhoff, 2007).

What followed is today called the "*doken kokka"* (土建国家), or the "construction state," in which the politicians, bureaucracy and the construction industry form a symbiotic circle where everyone helps each other out. Politicians help legislating construction favourable policies and meditate between the construction businesses and bureaucracies, and in return gain big public projects to their electorates from the bureaucrats, as well as campaign donations from the businesses to stay in power. Businesses in turn help the bureaucrats to get good retirement posts and get to advise the bureaucracies on new construction projects. In return they get contracted by the government, as well as insider information on upcoming projects. (Feldhoff, 2007)

While it was originally considered to be the source of Japan's miraculous economic boom, and probably with some truth in the argument, the system grew heavier and more corrupt with each passing year (Sorensen, 2002). In the late 1980's there were already numerous scandals, and ever since the 1990's there has been an active movement demanding the reformation of the political sphere. As it turns out however, such reforms are not easy to execute, and the ideology of construction state still runs strong, even in the Japanese politics of today (Koichi, 2005).

The reason why the construction state was so successful in the beginning is simple; Japan lay in ruins, and rebuilding has always brought out dramatic economic growth to which the state then accustoms to. In the case of Japan, it was in a way a literal "from rags to riches" -story in just 20 years, a timespan of roughly one generation, from 1950 to 1970. The infrastructure and the industries were also badly under-developed, so naturally any improvement in the logistics would result in noticeable growth in economic activity, not to mention how the American support also helped in kickstarting the economy. In other words, the rebuilding brought to light certain fields where decisive action was required. However, once that action had been taken, it was hard to resists the idea that the same medicine which had healed the initial illness would keep on improving the system forever. Unsurprisingly, this quickly lead to overinflated infrastructure projects which could hardly be justified.

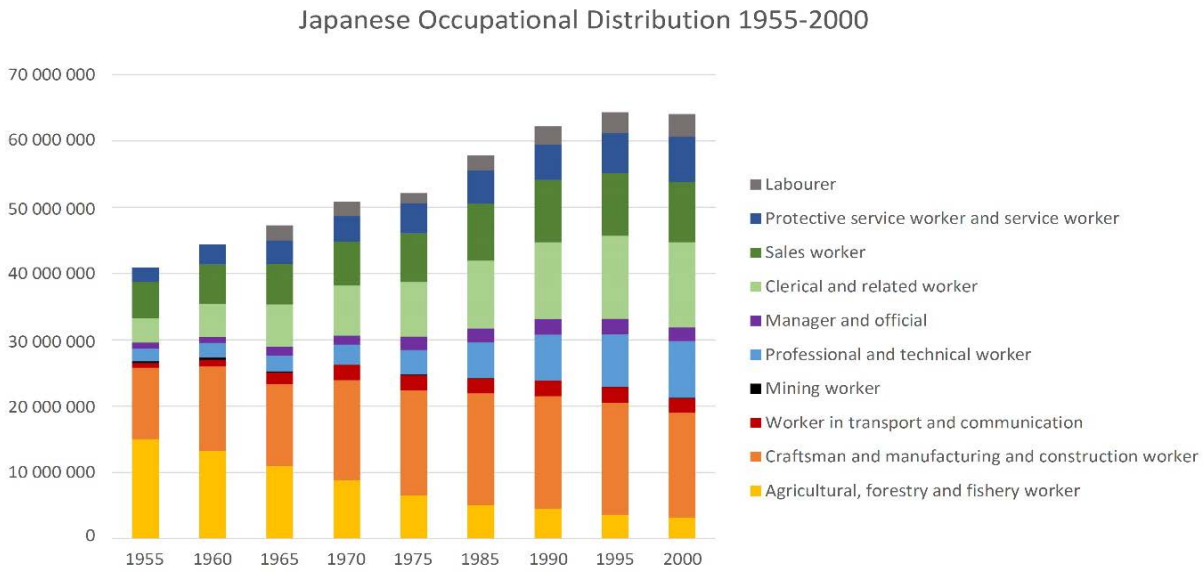


The working of construction state; adapted from (Feldhoff, 2007), redrawn by the author

Worse still, taking economic growth as the sole guiding principle of the nation had other problematic consequences as well. Starting from the Meiji-period, the movement to cities in pre-war Japan was always motivated by the lack of jobs in the countryside. Thus, while the rural population steadily declined in portion, the absolute population stayed roughly the same. However, after the second world war this structure changed dramatically, as the never-ending quest for economic development, and the quickly spreading urbanization that it sparked started to devour the old rural districts. No longer was it necessary to move from countryside to city; the city came to you! The occupational distribution of Japan reveals this as the portion of people working in agriculture and forestry quickly diminishes; urbanization and economic growth swallow the alluvial farmlands of the *Tōkaidō*. In turn, sales and services are the fastest growing industries together with technical manufacturing and construction, exactly the type of industries that the economic growth brought with it.

Unlike Finland, Japan did not institute any form of social housing policy after the war either. The problem of producing affordable housing was left virtually entirely to the private sector to solve. This gave birth to frankly substandard housing production (Koichi, 2005). The first public housing projects, *danchi* (団地), were started by the Housing Corporation, which reformed into JHC, Japan Housing Corporation (*Nihon Jūtaku Kōdan*; 日本住宅公団) in 1955. With the New Residential Area Development Act (*Shinjūtaku Shigaichi Kaihatsu hō;* 新住宅市街地開発法) in 1963, a Japanese version of new-town development began, although these developments were relatively rare, and again unlike their British counterparts, rarely tried to be independent "towns" (Sorensen, 2002). Most were only for sleeping, although exceptions do exist.

Before delving deeper into the problem, one aspect of Japanese urbanism deserves mention, and inspection; the new City Planning Law of 1968. While this law has been revised a couple of times, most recognizably in 1998, it is still the 1968 law that constitutes the backbone of Japanese planning today (Watanabe, 2007). Enactment of the law was promoted by the wild, uncontrolled urban sprawl that spread almost blindingly fast, as well as by the environmental damage. The living conditions worsened visibly, and soon enough the very environment was effectively poisoning the residents.



Occupational distribution of employed persons in Japan 1955-2000 (www.stat.go.jp)

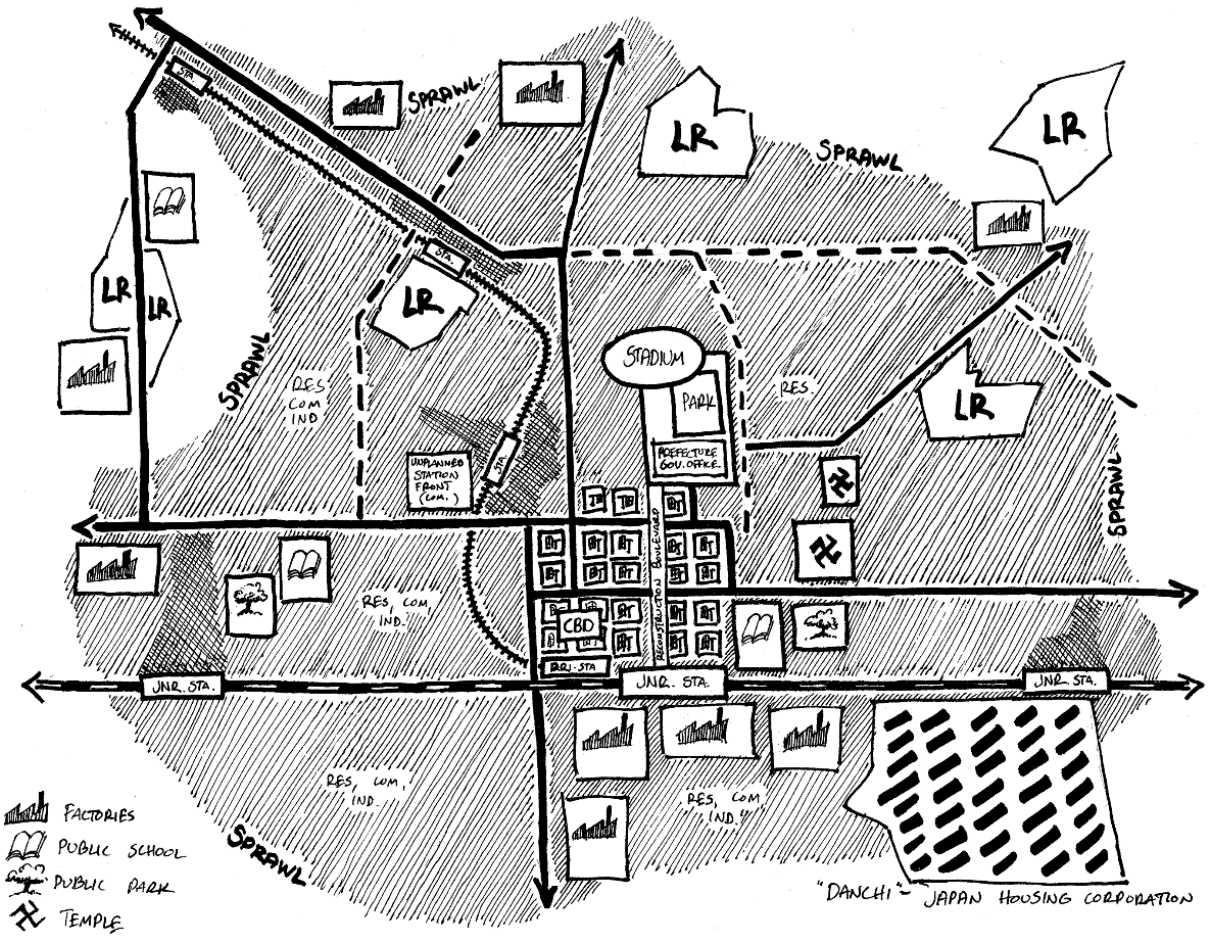
For example, before 1960's, nightsoil was still commonly used as a fertilizer, and thus it was still collected by hand for selling in normal households. 1960's however saw the introduction of cheap chemical fertilizers, which quickly rendered nightsoil simply unwanted waste. Even though this fact was acknowledged already in 1960's and made a major priority of the Ministry of Construction, by 1970, only about 16% of households were connected to sewage systems, and by 1988 this number was still at only 40%. Even in 1998 the number was at 64,7%, meaning that just 20 years ago roughly a third of permanent households in Japan were still outside the public sewage system. Even where there was a connection to the municipal sewage system, precious little was done to treat the wastewaters, which usually simply washed into the local rivers untreated. This would also include all the industrial discharges. (Sorensen, 2002)

Unsurprisingly, this had serious detrimental health effects, culminating in chronic diseases among adults, and disabilities among babies. However, while it can be expected that private businesses would resists more regulation on basis of it hindering profitability, the real surprise, and at the same time the truly revealing factor in Japanese political sphere, was the fact that the government took the side of the private businesses, quite literally leaving the masses without a single defender. While horrible beyond measure as a though, the silver lining was that this proved to be the proverbial last drop; the local rights groups and activists started campaigning furiously for compensations and solutions for the problem (Sorensen, 2002). Unlike in the socialist-hunts at the start of the 20th century, there was not even a politically superior ground to be gained by attacking the people for being concerned about their and, more importantly, their offspring's health. And yet, the road to recognition and redress was long and hard nevertheless. Sorensen quotes the "Big Four" court cases in 1972 that were all judged in favour of the common people as the turning point.

As a result, legal precedents had been formed, new legislation was drafted, the businesses concerned had to pay hefty compensations, and virtually all private businesses started investing heavily in pollution controls. The fact that this did next to nothing in inhibiting or stopping the economy from growing is a major revelation of the Japanese case, indicating that maybe a number of other steps to control the urban development could have been taken as well without endangering the precious economic growth (Sorensen, 2002). What everyone agrees on, is that a tangible enemy to personal health was something that finally brought the Japanese civil society together, ultimately yielding recognition to the common people.

Before this happened however, the growing concern for all manner of environmental damage caused by the wildly spreading urban sprawl, including but not limited to the pollution, air quality, congestion, low-quality housing, sewage and trash, etc., lead up to the drafting of the new law. The real problem was that the zoning of the previous 1919 system was unable to control what manner of development took place and where. For example, for a big industrial company, it was far too easy to first lobby for a prime plot in the city, then build the factory, and cheap housing for the workers right next to it. Further, the highly profitable business of operating private railways that was described in the previous chapter was also spreading the urban sprawl, only much faster now that the population was concentrating in the cities like never before. The railway development brought the desirable possibility of living in healthy suburbs while working in the congested cities.

The answer to this problem was *senbiki* (線引き), literally meaning "drawing the line." The idea was that the city area would be divided into two different type of areas; the Urban Promotion Areas, or UPA (*shigaikakuiki;* 市街化区域), and Urban Control Areas, or UCA (*shigaikachōseikuiki*; 市街化調整区域). Urban development would be encouraged in the UPA-areas, whereas strict regulations would be placed on development in UCA-areas. Areas would be designated as UPA with the intention that they would be fully built in 10 years. In turn, the *senbiki* would be revised every 5 years, thus providing new land for development at a reasonable pace, and thus not only controlling the direction but also the intensity of urbanization. A development permit system was also instituted together with the *senbiki,* and it was the first time the municipalities received a tool for declining permission for urban development if all the prerequisites, including serviceability of the development area, were not met.



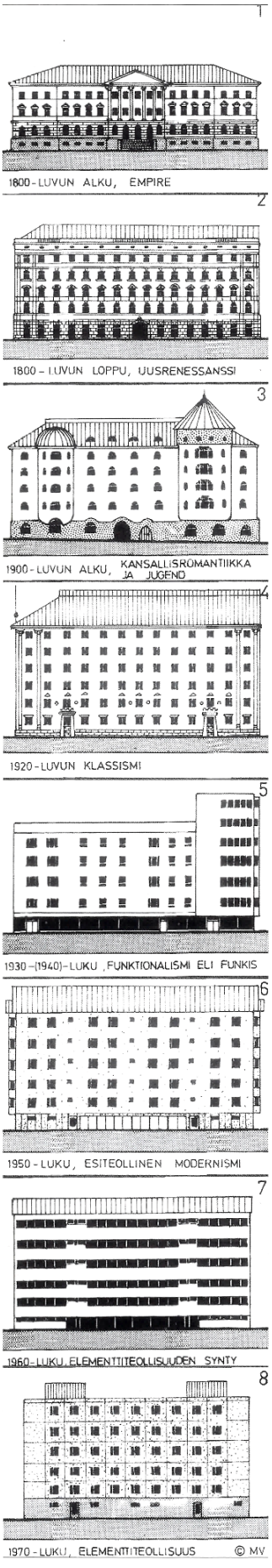
Japanese towns in late Showa-period (adapted from (Sorensen, 2002), p. 194 by the author) (see text)

Unfortunately, this system also had problems, two of them very specific. The first problem was the fact that the value of land designated as UPA would skyrocket as opposed to land designated as UCA, leading especially the farmers to lobby for what was effectively over-designation of UPA over UCA-areas. Not only that, but the big businesses were also becoming increasingly interested in land as an investment, or more specifically as a guaranteed collateral for loans, which lead to incredible speculation over land prices, which in turn lead to the bubble economy (Ushio, 2005). Consequently, municipal governments and administration were unable to keep up with the gross over-designation of UPA.

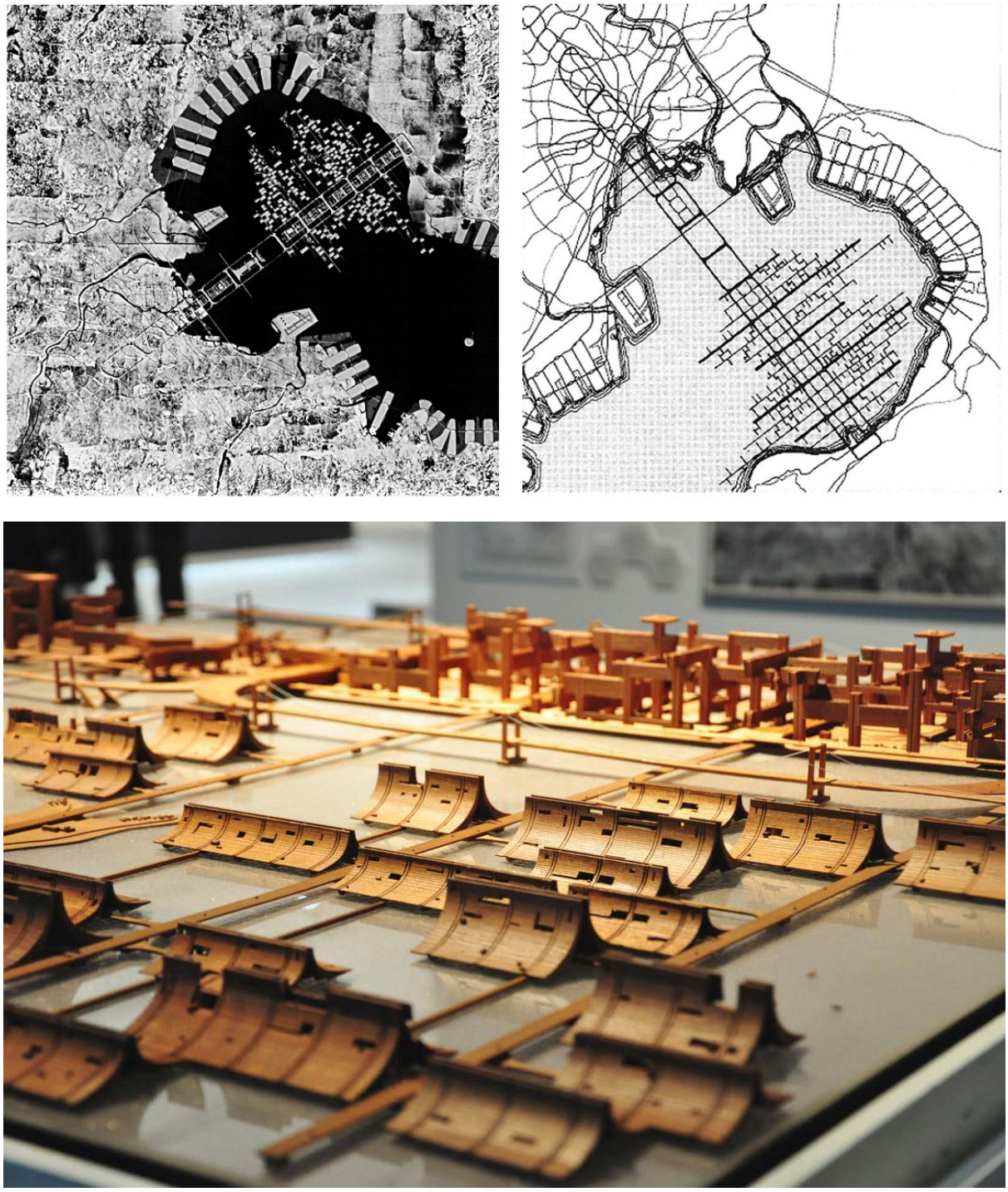
The second problem was that the development permit system also had serious loopholes in both UPA and UCA areas (Sorensen, 2002). In UPA areas, any development less than 0,1 hectare (1000m^2) in size was exempted from applying for a development permit, and in UCA areas there were several ways to turn a UCA-district into UPA-district, mostly via showing that it was connected to an existing "urban centre" in one technical way or another. Even in city planning areas not divided into UCA or UPA the limit for development permit was 0,3 hectares. This lead to what is called *mini-kaihatsu* (ミニ開発), or mini-developments, slowly but steadily developing the land in small chunks.

Showa-period was indeed a time of unparalleled urbanization for both Finland and Japan. Above is the image of Japanese cities towards the end of the Showa-period. With all the above-mentioned problems going on in Japanese urbanization, the urban fabric exploded in every direction. When looked at discerningly, the previous forms can still be seen in the structure, but nevertheless this seems like a completely new town. It should also be noted that the urban sprawl had finally reached the "next" cities along the national inter-city rails, truly devouring everything in between. Here and there LR-projects and station fronts, as well as the occasional *danchi*-projects present small islands of planned urban structure, but ultimately these are vastly outnumbered by the sheer size of the unregulated urban sprawl that has now extended in every direction.

It is in fact interesting to note how many different kinds of town plans and planning ideologies there were in pre- and post-war Finland. The only Japanese "town plans" that have survived are largely infrastructure based, or follow a very systematic approach, and thus are not really plans at all. On the other hand, the few plans that were meant to be something different were entirely in a league of their own. Take for example the Kengo Tange (健三 丹下) (1913-2005) plan for Tokyo in 1960, which is a very good example of the problems that the plans faced; they were overly ambitious and visionary, and as such unfeasible. This had been so ever since the rebuilding after the 1923 Great Kanto Earthquake, after the Second World War, and especially during the fast urbanization of Japan.



Finnish residential architecture through the ages, (SAFA; "Viihtyisä Ympäristö" 1961); adapted from (Obase, 1997)



1960 plan for Tokyo by Kenzo Tange; for sense of scale it should be noted that Tokyo Bay is roughly 22-24 kilometres wide; (archeyes.com/plan-tokyo-1960-kenzo-tange/) ©

Tokyo has had many other at least equally ambitious projects in the past. The most memorable are probably the Ishikawa plan for reconstruction of Tokyo after the Second World War, Gotō Shinpei's reconstruction plan after the 1923 Great Kanto Earthquake, or the Neo-Tokyo Plan of 1959, in which an artificial island was supposed to be built in the middle of Tokyo Bay to house a new airport among other public functions. These are practically the equivalents of the Eliel Saarinen Greater Helsinki plan, if not bigger, as can be seen from Tange's plan to float the Tokyo bay with structures of basically sci-fiction scale. It can thus be concluded that urban planning in Japan has always been a highly technical art.

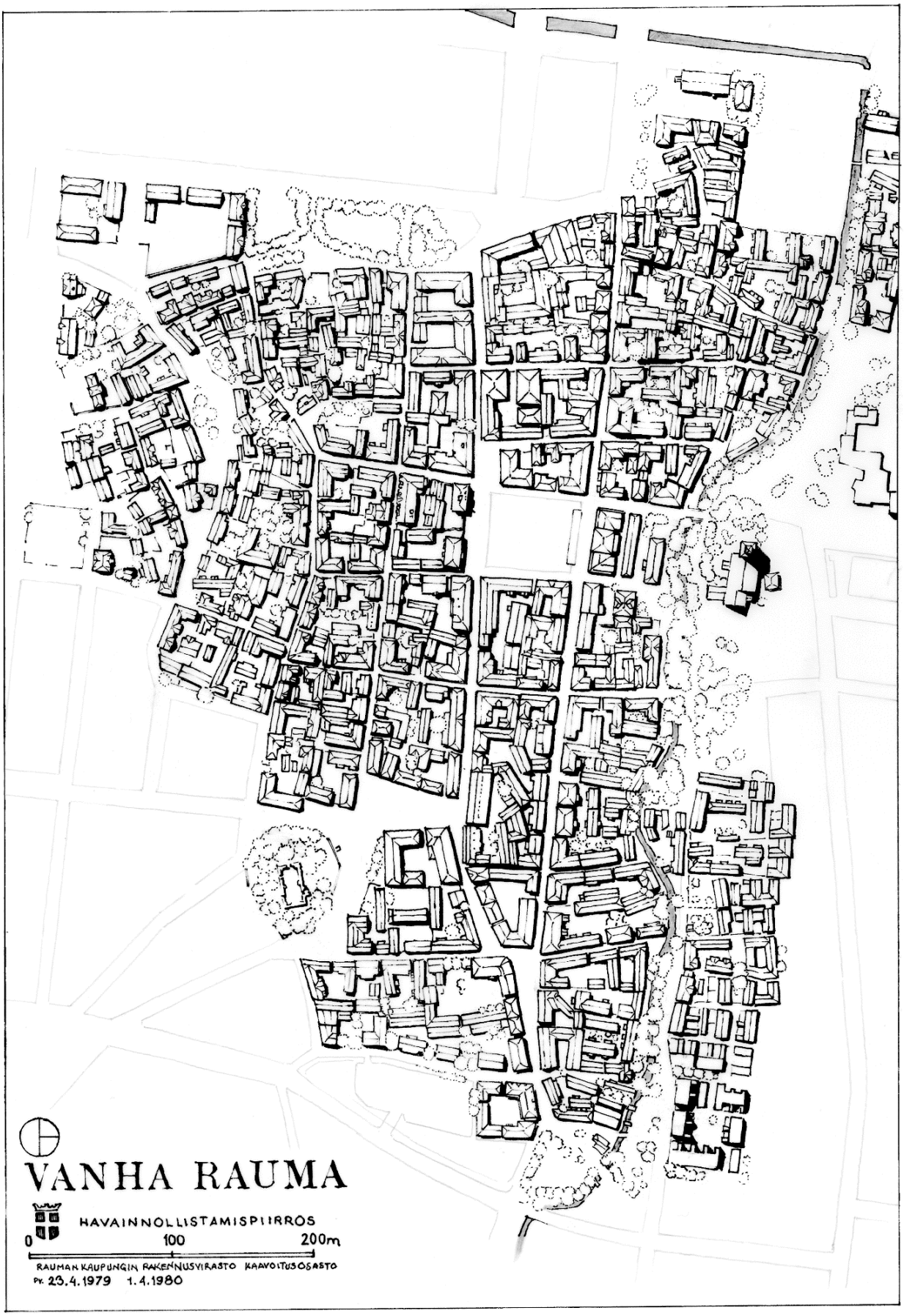
The Finnish town plans on the other hand showcase quite a bit of variation in style and size alike. From the old wooden gridiron towns, to the more majestic Empire, followed by functionalism and forest towns, then the renaissance of the grid-iron plans, and finally to more freeform ones. Likewise, while buildings decay relatively quickly in Japan, in Finland there are many buildings over 200 years old, and their age can be figured relatively accurately through their architectural styles. Even more, many of the architectural styles can be directly connected with the urban fabric of the period. However, we cannot do the same kind of generalization with the Finnish town as we can with the Japanese one, for styles and ideals changed quickly and frequently in post-war Finland.

To continue where we left off, the popularity of the Finnish forest towns was largely due to the nature of the migration from rural to urban areas In Finland. The new residents identified with the sparse, green environments that reminded them of the countryside much better than the tightly packed cities. Nevertheless, as was mentioned above, the forest towns were quickly coming under criticism from the young architects, as they were considered very inefficient. The new generation of city-born architects had something much more urban in mind, hence the renaissance of the gridiron plan in the 1960's. The gridiron layout makes its second coming together with the prefabricated apartment houses, a curious detail as both the prefabricated houses and technical gridiron plans reverberate quite well with each other.

Following this wave of new urban ideas, the story of the Finnish wooden cities draws to a close. Before the 1960's, the restructuring of urban centres had been economically unfeasible, but with the wave of urbanization and economic growth in the 50's and 60's the situation changed. Simultaneously, aiming for the benefits of replacing old housing with new lamella housing, private landowners had left the old wooden districts neglected for a long time, waiting for them to deteriorate beyond reasonable repair (Sundman, 1991). By the mid 1970's, most of the wooden districts were under plans for reconstruction. Curiously enough, Sundman argues that the renaissance of the gridiron plan was not connected to the re-planning of the old gridiron wooden districts, as the open common space surrounded by personal buildings was rejected in the new gridiron plans completely (Sundman, 1991).

Unfortunately, most of the small- and medium-sized urban areas had grossly overestimated their growth as the wave of urbanization started to slow down, and the plans proved to be overly ambitious. As a result, the situation stagnated, and whole districts were rotting away as private landowners were waiting for a big chance to cash in with apartment blocks. The result was a chaotic patchwork of a few big apartment buildings here and there in a sea of quickly deteriorating empire-style wooden housing. This development was not too unlike the Japanese counterpart, although vastly different in scale. Consequently, even though it should be fair to say that the uniformity of Finnish urban areas is several levels above the Japanese ones, it would be exceedingly incorrect to claim that the dangers encountered in the Japanese system would not have been present in Finland as well. In fact, whenever there was a chance of speculating with the land values, or exploiting loopholes in the system, it was done in Finland just as eagerly as in Japan (Sundman, 1991).

As the new gridiron centres were not producing the kind of vigorous and energetic urban life as was originally planned, the virtues of the old wooden towns were heralded in many publications. Less than a decade from the first areas of boring, bleak and monotonous residential areas, the issue of housing quality spread to larger audience, now involving not only architects, but also civil engineers, filmmakers and authors among others (Sundman, 1991). Very quickly a consensus was arrived at; humans need varied patterns of social interaction, and the old wooden districts had been exactly these kinds of living environments. Projects in other Scandinavian countries also helped to recognize the personal and charming ways of life that the old wooden houses had provided. Interest in the living environments spread quickly, and attention to existing wooden districts was demanded in the 70's.



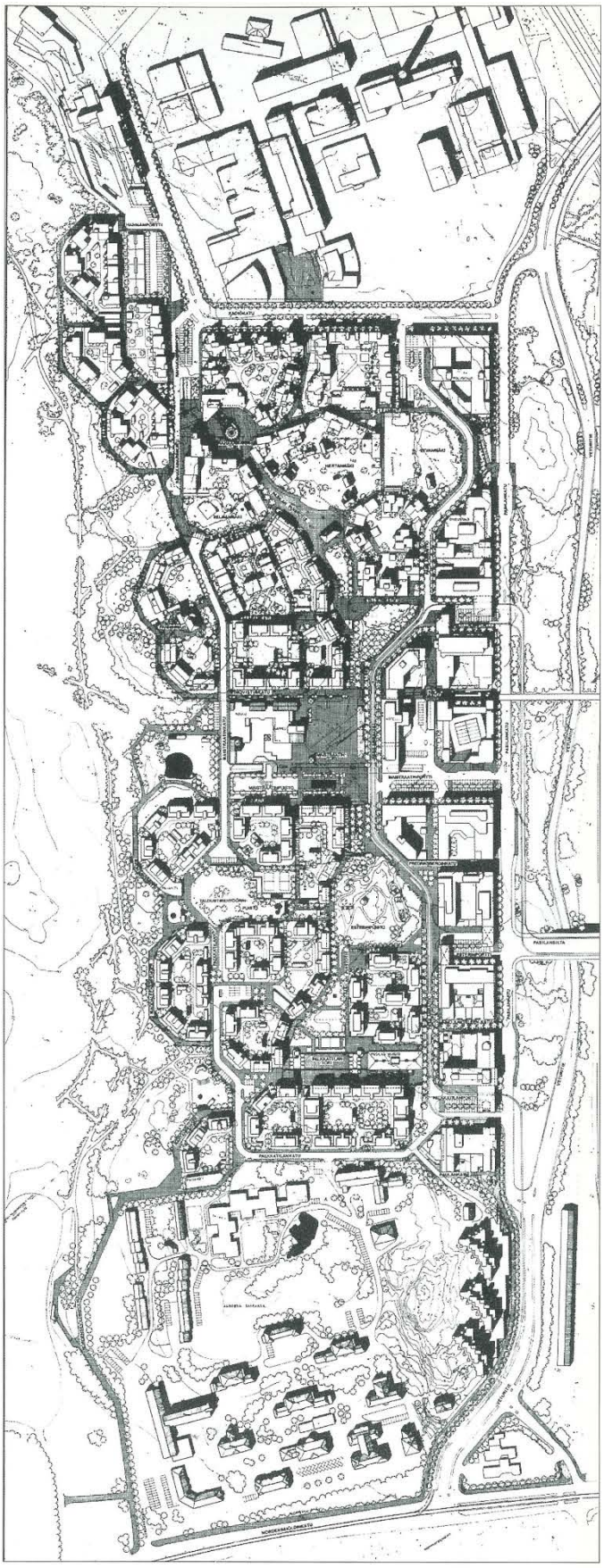
Rauma, illustration of the conservation plan, 1982, plan redrawn by the author from (Sundman, 1991)

Old wooden house living room in 1890's, Kalevankatu 26, Helsinki, adapted from (Kärki, 2014) (a), © Helsinki City Museum

Nevertheless, by the 1980's the Finnish wooden town had effectively disappeared, as the new multi-story lamella buildings had completely replaced the old districts or left the wholeness of the districts hopelessly fragmented (Sundman, 1991). The damage that already been done in letting the wooden cities rot proved unrepairable, and thus the fragmented districts were simply converted slowly into more modern forms of urban structure without much fuss. The old Finnish wooden districts had vanished just like their Japanese counterparts, with impeccable similarity in style and timing.

Both nations were thus tackling environmental problems, but where the Japanese were fighting with pollution-related environmental problems, Finns wrestled with the quality of their living environments and one-sided planning. The problem in Finland was that the 1959 Buildings Law had left smaller urban developments unchecked, as they could be realized without reference to the local plans. The 1968 revision fixed this problem, as it made planning obligatory everywhere, but a complete overhaul of the system was nevertheless drafted and planned for the mid-70's. The overhaul was aimed at the chaotic developments in smaller urban centres, including easing the buying of unbuilt land, a planning fee that would have returned most of the increase in land values to the community, and a general increase in overall democracy (Sundman, 1991). However, with the slowing down of the urbanization this overhaul was gradually downgraded to small reforms whenever and wherever they were needed. Consequently, Sundman summarizes;

> *"[…] It has been a recurrent feature of Finnish building legislation that social developments inspire reforms which are carried out only when the needs have already changed, and that planning law has been late to develop both in comparison with the other Scandinavian countries and in relation to actual needs. […]"*
>
> Sundman, 1991, p. 105



Pasila, town plan by Reijo Jallinoja (1941-) in 1979; adapted from (Sundman, 1997)

In 1960, only 5% of all housing in towns and boroughs was multi-story housing made of brick or concrete (Sundman, 1991). This lack of tradition for big apartment buildings outside of city centres together with the increase in environmental awareness and demand for quality living conditions resulted in varied town plans ever since the late 60's. Depending on the size and nature of the development, all manner of compositions and typologies were experimented with, with no common theme beyond the renaissance of the gridiron plan, which was heavily adapted as well. Especially sub-urban areas of bigger cities were home to new types of developments, most emphasizing high-quality living and nature going hand in hand.

This leaves us with the developments in the bigger urban centres. Ever since the Greater Helsinki Plan by Eliel Saarinen, the restructuring of Helsinki city centre had been a common topic of argument, with numerous problematic aspects. Also, higher concentration of cars and public buildings than in other Nordic big cities, Helsinki city centre made the traffic a serious issue (Sundman, 1991). Finally, a plan was commissioned from Alvar Aalto, who designed a monumental city centre of numerous 'white palaces of culture' around the Töölö Bay in 1961-64. In effect, Aalto designed the centre to be an experience for a traveller arriving by car or train. The plan came under criticism, and was ultimately shelved with only few elements realized, most notably the Finlandia Hall clad in white marble.

Meanwhile, more and more private companies established themselves in the city, and the public authorities expanded in-step, leaving the city badly imbalanced between workplaces and residences. Already in 1953 the number of inhabitants in the inner city began decreasing despite numerous housing projects, reaching

around 5000 new workplaces and 5000 less inhabitants annually in the mid-60's. To reverse this trend, a new master plan to regulate inner city functions, promote concentration of commercial life and residency, as well as to curb the demolition of existing buildings was decided upon. Using plans from Stockholm (*Zone Plan*, 1972) and Oslo (*Soneplan*, 1973) as models, the new plan for Helsinki was published in 1973, and approved in 1976. It should also be noted that conservation of historical architecture took a more prominent role in Helsinki than in other Scandinavian capital cities. (Sundman, 1991)

Among the many developments in Helsinki, Pasila deserves a special mention as a Finnish version of the Japanese 'Superblock' urban structure. It also showcases the HITAS-system that was developed during the planning of Katajanokka harbour-area, a plan that was published in 1976. The HITAS-system included a first option at fixed prices for the municipality in case of a sale of privately-owned apartments, granting the municipality good control over the housing prices (Sundman, 1991). Also, a big portion of the residences were social housing. Consequently, after the development of Katajanokka, all projects where the city of Helsinki has been a major landowner have included the HITAS-system. In accordance, the plan for Pasila was published 1979, and showcases the clever rejection of the renewed gridiron plan. Big and regular public and commercial buildings shield the more chaotically placed residential areas from noise and tumult of the city, in this case the big rail yard. Sundman concludes his look of Finnish planning through the ages in the following manner;

> *"[…] The town planning tradition in Finland is not strong. Architecture has made a deeper and more significant impact on the cultural history of the country. The development of urbanism started late but was then rapid, and over the last century it has generated a built environment in which integrated conceptions of excellence and originality are rare. Finland has received impulses from Scandinavia and continental Europe, which have been fused into national and often unassuming forms. To a greater extent than other countries Finland has made use of competitions, which have not infrequently resulted in interesting projects. Many plans which have led to outstanding environments have come into being under private auspices or private initiatives. However, the fact that the public planning system has not been developed to the same extent as in other Nordic countries and that private initiative has had more scope, has not generally ensured a balance in societal developments. At the same time the negative effects on the built environment are all too obvious."*
>
> Sundman, 1991, p. 112

Harsh words, and when compared with the Japanese example, Sundman's verdict runs somewhat hollow. Nevertheless, his words should not be ignored, as many problems were common to both nations, despite the cross difference in advantages and disadvantages. Further, all of these problems were caused mainly by wants in planning. Ultimately, it can be said that the urbanization, as well as the tradition of urban planning was begun in earnest in both nations only during the post-war reconstruction, a characteristic which somewhat explains the problems in planning. During this period, both nations underwent similar major changes in structuring of the nation, both physically and mentally. It now remains to see what has happened in both nations during the latest generation of the modern age.

Heisei (1989-)

And so, we have arrived at the modern age. While there have been some important developments during the past three decades, this is nevertheless but a single generation, and as we have seen, it is difficult for much to change during just one generation. After all, even the two world wars were unable to make much of a dent in the underlying urban traditions. Thus, the developments of the modern age shall be introduced as a foundation of the systems of urban planning that are in place today.

Unfortunately, following the strong regulating of urban development activities in the 1970's Japan, the 1980's saw a strong counter-swing towards smaller government and planning deregulation, as it was heralded by such worldwide free-market champions as Margaret Thatcher (1925-2013) and Ronald Regan (1911-2004). It was argued that construction and urban development constituted the single main aspect of Japanese economic growth, and thus the central government, arguing that too strict city planning was in fact responsible for the chaotic urban fabric, aimed at reducing the controls planning had over urban development throughout the decade. These measures attacked mostly the *Senbiki*-practise, meaning the division of areas into UCA (Urban Control Area) and UPA (Urban Promotion Area), weakening the distinction between the two even further (Sorensen, 2002). While this planning regulation is far from being the only proponent of the famous Japanese Bubble economy, it was nevertheless a major encouragement to the moody economy.

Unsurprisingly, in just two years from the beginning of Heisei, in 1991 the Japanese bubble burst. Somehow the entire world had bought the inconceivable lie that land in Tokyo really was *that* precious. As was written above, the bubble had originally started with the Japanese companies using the speculative land prices as leverage by using land as collateral when applying for loans (Ushio, 2005). Just to get a sheer sense of scale for the incident, at the height of the bubble, the 5-kilometre circle that houses the imperial palace at the heart of Tokyo would have been more valuable than the *entire state of California* itself (Sorensen, 2002, quoting Pemel, 1998)! Recovery from the bubble took a big and heavy toll on the Japanese and marked the beginning of what has been called "the lost decade."

Leading up to the bursting of the bubble, the Japanese construction lobby and the iron triangle had been extremely flamboyant in their use of money. Following the bursting of the bubble, the Japanese government continued financing numerous extremely expensive infrastructure projects that were supposed revive the failing economy, but to no avail (Feldhoff, 2007). Ultimately, the massive boost to the economy that the major infrastructure upgrades of the inter- and post-war-periods had brought with them had already been achieved. Frankly, the infrastructure network no longer needed massive overhaul, and yet still money has been directed to big infrastructure projects ever since, a clear sign of the deeply encroached corruption inherent in the Japanese construction scene (Feldhoff, 2007).

Further, it was not only the Japanese construction economy that went wild during the bubble. The entire Japanese society was engulfed in a form of spending-frenzy. Today, many Japanese even quote that the generation gap between those who learned their sense of value (of money) during the bubble and the current generation is enormous, and quite often constitutes a problem in decision-making. The sheer respect and authority that the Japanese culture places with age can badly clash with the sense of value that the younger generation has learned through their personal experience.

Moreover, Japan of today is experiencing an extreme phenomenon of aging and declining population. It is almost impossible to talk about the Japanese society without encountering the word *"kōreikashakai"* (高齢化社会), which means "aging society." By 2060 it is estimated that the population will have fallen to about 85 million, a loss of over a third of the entire population, and even in the most optimistic predictions, the population will fall under 100 million-line well before 2050 (IPSS,

2012). Consequently, the number of empty residences and houses is rising so quickly that finding new uses for these empty houses, *akiya* (空家), has become a major field of study among Japanese students of urbanism, as well as a popular trend among Japanese architects.

Meanwhile, Finland had also been experiencing fairly decent economic development throughout the post-war period. However, Finland was still not properly industrialized, although manufacturing industries had grown to a share of about one third of the GDP, whereas the corresponding share was over half in proper industrial countries (Vahtola 2003). While the oil shocks of 1975 had shaken Finnish economy as well, it recovered much faster than the rest of the European economies thanks to the intensified trade with the Soviet Union, which was a huge asset to the Finnish economy in all regards. However, Finland badly wanted to join the European economy as well, and this required releasing banks and currency from heavy regulations. Money was made easily available with numerous measures, and indeed between 1985 and 1988, stock prices went up roughly 250%, prices of housing by 70%, and households went deeper into debt, roughly from 40% of yearly income to 80% on average (Vahtola, 2003). In effect, Finland was in a dramatic phase of significant economic growth.

Alas, this was extremely artificial growth, and could not last long, especially considering the speed at which many of the reforms were instituted. And indeed, in the beginning of 1990's, the Finnish economy overheated badly, and Finland fell into the worst depression Finland has experienced during the modern ages. In a nation of roughly 2,33 million working adults, over 500 000 jobs disappeared in a short period of time, resulting in unemployment of over 400 000 people in 1994. The economy finally started to recover in 1994, but the level before the depression was only achieved in 1996, and the first year Finland did not need to increase the national debt was 1999 (Vahtola, 2003). Yet again we have run into deep parallels between Finnish and Japanese history. As a result of its own "lost decade", the government and municipalities of Finland fell from a relatively debt free status to roughly average Central-European levels, and the level of unemployment has stayed relatively high ever since.

The fall of the Soviet Union in 1991 did nothing to help the Finnish economy, which had always been highly dependent on the eastern market. Signs of the failing Union were already in the air in later 1980's, when Mikhail Gorbachev (1931-) became the political leader in 1985 and tried to renew the Union with numerous reforms. It was in fact these signs of weakness that drove Finland towards European markets in the 1980's. Even though Finland had heavily opposed joining EU while the Soviet Union was standing, after its collapse Finland began negotiating entry into the European Union. Decision to join was made in 1994, and on 1st of January 1995 Finland became a member.

Here Finnish education deserves a special honorary mention, for ever since instituting the compulsory 6-year long grade school education for every Finnish child in 1921, education has been Finland's greatest asset. Already in 1970's over 60% of the nation had finished middle school. In the beginning of 1950's, just about 10% of 16-year olds started high school, but in 1980 half of the age class started high school. Universities and research had already received very strong foundations during the inter-war period, and this was only ever strengthened during the post-war period.

Year 2000 saw two new big revisions in Finnish legal code. A new constitution was introduced, which greatly reduced the powers of the president, and the City Planning Law was renewed under the name "Land Use and Construction Law" (*Maankäyttö ja rakennuslaki*). The new planning law lessened the responsibility of the central administration to approve urban plans. Instead, now the municipality had to provide its citizens with substantial chances to express their opinions about urban planning and zoning. However, the amount of real influence that citizens have received with this change has so far been disappointing more often than not. The law also included new measures for collaboration between private developers and municipalities in development of plots.

Modern Urban Planning

An important remnant of the Post-War Showa period Japan is the District Planning (*Chikukeikaku;* 地区計画) system instituted in 1980. After the Building-Line system of the 1919 law had been replaced with much simpler road-width regulations in 1950, the urban sprawl had gotten even worse in the fringe areas. While somewhat flawed, the Building-line system had at least included measures of detailed design of road networks *before* development took place. After these restrictions disappeared, developers started to buy land in existing neighbourhoods, and use the very generous Floor-Area-Ratios (FAR) of the plots to build high-rise apartments in place of detached housing, resulting in a chaotic mid- and high-rise boom (*manshon-boom;* マンション・ブーム) (Sorensen, 2002). It was also hoped that with the District Plans the zoning laws could finally be tailored to adapt and suit the individual needs of different cities and districts.

District Plans consist of two parts, a District Improvement Plan, and a Statement of Intent. The statement acts like a Master Plan of sorts, showcasing the hoped-for future in various ways, including maps and renderings of future images. However, this statement itself does not yet carry any legal power, any regrettably often municipalities cannot issue the actual plan because of the extremely high level of agreement required to institute them; agreement of minimum of 90% or more of the residents in the planned area is required. However, on the other hand District Plans finally gave the local governments concrete tools to institute hard limits and regulations on private development activity, for an enforced District Plan has legal power to restrict numerous things that are normally only lightly controlled by zoning and building standards, such as FAR-ratios, setbacks, shape and design of buildings, including height, materials, colours, styles, and even landscaping details, such as fences and trees (Sorensen, 2002). Even some of the planning deregulation measures that were in introduced in the 80's were skilfully used to negotiate more landowners to support these new District Plans.

Numerous ways to utilize District Plans have then emerged, including control over new residential areas, historical preservation, as well as redevelopment or improvement of old industrial areas and existing sprawl. While the famous *machizukuri* (まちづくり) movement was not a product of District Plans, the legal framework provided by the District Planning finally gave concrete tools to the communities engaged in *machizukuri*. The word *machizukuri* in fact predates District Plans, for it is first used in 1957 by professor Shiro Masuda (四郎 増田) (1908-1997) to describe a citizen movement that wanted to protect his home town from undesirable urban developments (Watanabe, 2007).

Today, *machizukuri* is an extremely varied practise, with every project being a unique case. It is illustrating how often the word itself is taken to be an umbrella term with more and more varied terms under it, such as *machisodate* (まちそだて), crudely meaning "Town-nurturing" (Watanabe, 2007). *Machizukuri* can thus take the scale of an entire district, or a single street, and it can be initiated to protect something or to promote change. For example, sometimes *machizukuri* is not even connected to urban change, but instead its meaning changes to pure community development, improving local services and community. *Machizukuri* is fast becoming more and more popular, with many cities even having guidelines, guidebooks and professionals available for consultation for communities interested in starting new projects. The long road under perpetual lack of resources and overbearing central administration surveillance left the municipalities with only one real resource; their citizens.

Nevertheless, while it is wonderful to see such civil communities finally rising within the Japanese society, it is important to not forget the importance of official urban planning. So far *machizukuri*-projects have always been closer to tinkering, and such inconsistent and unique measures as *machizukuri*-projects cannot, and should not, be expected to fix the quintessential problems in the official and uniform urban planning of Japan (Ishida, 2007).

The Gate Tower Building (ゲートタワービル), aka "Bee Hive" in Osaka in 2006,
In 1992, the owner was unwilling to sell the land for the highway development, and instead rented the necessary floors to the highway; photograph by username “ignis;” (Wikimedia Commons)

Typical Finnish mainly residential cityscape; Töölö, Helsinki; (photograph by Hanna-Maria Hagberg)

Typical Japanese residential cityscape; Yoyogi-Uehara (代々木上原), Tokyo; (photograph by the author)

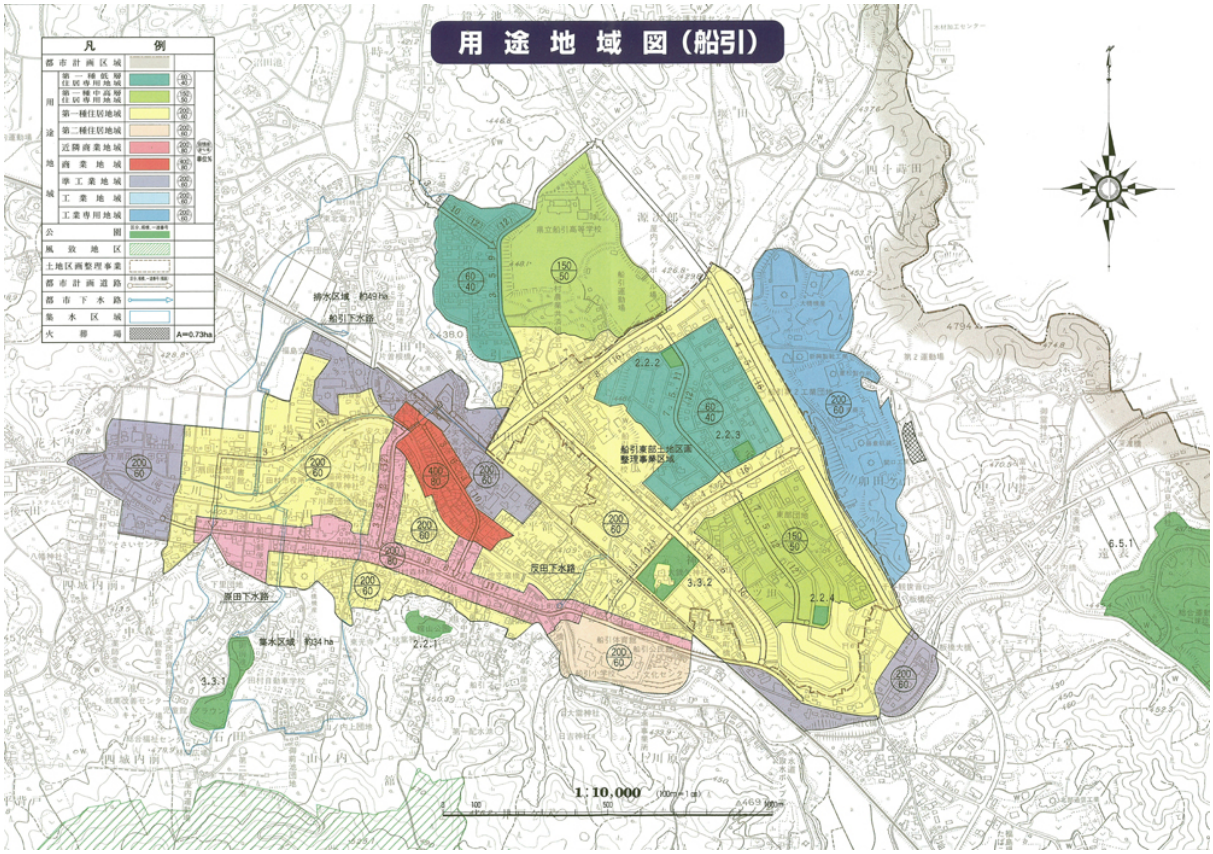
Zone	Floor Area Ratio (%)	Building Cover Ratio (%)	Prohibited activites	Purpose
Category I Exclusively Low-rise Residential Zone	50, 60, 80, 100, 150, 200	30, 40, 50, 60	hospitals, stores, offices, hotels, karaoke, independent garage, warehouses, theaters, repair shops, factories	to ensure an excellent living environment for low-rise houses
Category II Exclusively Low-rise Residential Zone	50, 60, 80, 100, 150, 200	30, 40, 50, 60	hospitals, stores over 150m2, offices, hotels, karaoke, independent garage, warehouses, theaters, repair shops, factories	to ensure an excellent living environment primarily for low-rise houses
Category I Mid/high-rise-oriented Residential Zone	100, 150, 200, 300, 400, 500	30, 40, 50, 60	stores over 500m2 offices, hotels, karaoke, warehouses, theaters, repair shops, factories	to ensure an excellent living environment for mid/high-rise houses
Category II Mid/high-rise-oriented Residential Zone	100, 150, 200, 300, 400, 500	30, 40, 50, 60	offices, hotels, karaoke, warehouses, theaters, repair shops, factories	to ensure an excellent living environment primarily for mid/high-rise houses
Category I Residential Zone	100, 150, 200, 300, 400, 500	50, 60, 80	hotels, karaoke, warehouses, theaters, repair shops, factories	to ensure an excellent living environment for houses
Category II Residential Zone	100, 150, 200, 300, 400, 500	50, 60, 80	karaoke, warehouses, theaters, repair shops, factories	to ensure an excellent living environment primarily for houses
Quasi-residential Zone	100, 150, 200, 300, 400, 500	50, 60, 80	warehouses, theaters, repair shops, factories	for the promotion of businesses suited to the characteristics of the neighbourhood that are adjacent to roads, while at the same time preserving an excellent living environment
Neighbourhood-Commercial Zone	100, 150, 200, 300, 400, 500	60, 80	factories	for the promotion of convenience for conducting commercial and other kinds of business to supply daily necessities to the inhabitants of nearby residential areas
Commercial Zone	200, 300, 400, ... , 1300	80	factories	primarily for the promotion of convenience for commercial and other kinds of business
Quasi-industrial Zone	100, 150, 200, 300, 400, 500	50, 60, 80	factories with strong possibility of environmental degradation	primarily for the promotion of convenience for industries which are not likely to damage the environment
Industrial Zone	100, 150, 200, 300, 400	50, 60	schools, hospitals, hotels, theaters	primarily for the promotion of convenience for industries which are not likely to damage the environment
Exclusive Industrial Zone	100, 150, 200, 300, 400	30, 40, 50, 60	houses, schools, hospitals, hotels, theaters	for the promotion of convenience for industries
Areas not zoned	50, 80, 100, 200, 300, 400	30, 40, 50, 60, 70		

Japanese zoning of today, adapted from "The Building Standard Law of Japan 2012, English-edition" by the author

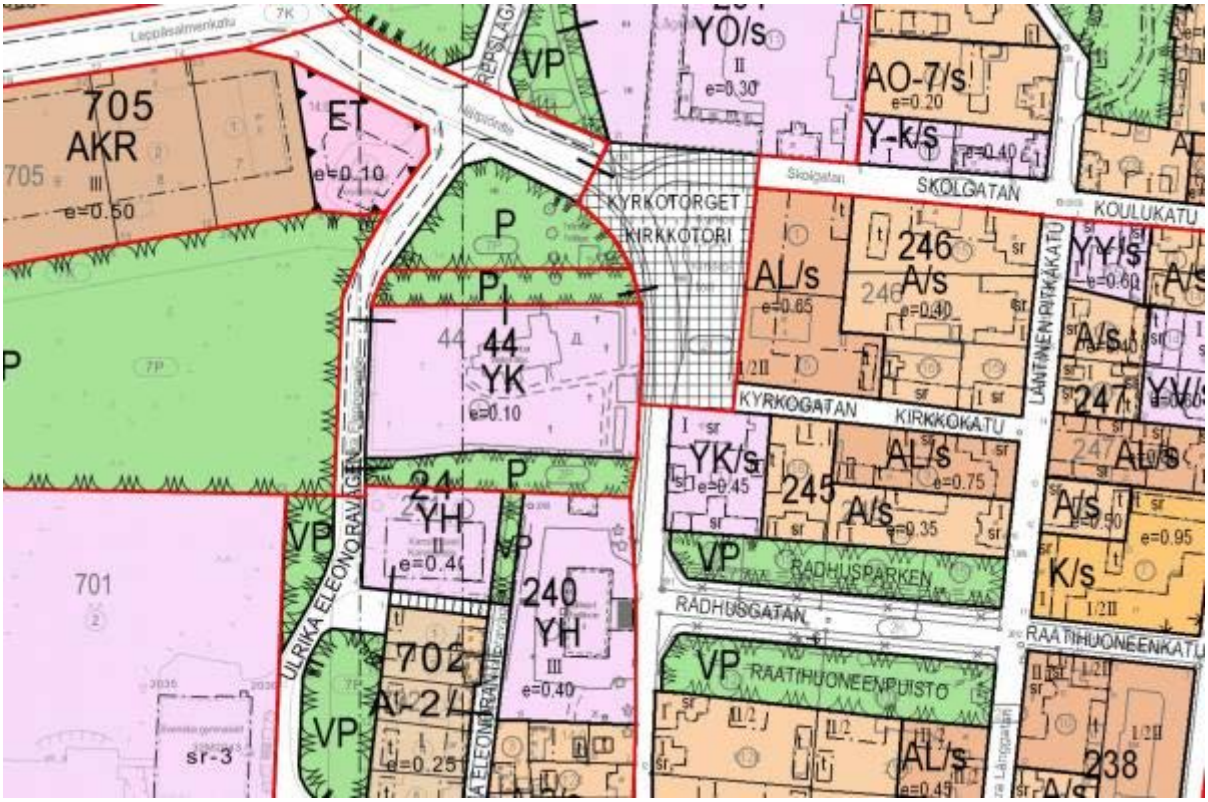
The official system of Japanese urban planning itself is somewhat confusing to say the least. While the Urban Planning Law itself is pretty straightforward, with the 12 different zones listed above, and the slanted-plane restrictions, as well as the minimum road-width requirements (which are not always met), there are numerous other laws that restrict land uses. In fact, the National Land Use Planning Law (*Kokudo Riyō Keikaku*; 国土利用計画) includes five different laws, which are the City Planning Law, the Agriculture Promotion Areas Law, the Forest Law, Nature Park Law, and the Nature Conservation Law. What makes the system so confusing is the fact that while some areas are under two if not three different laws, some areas are not covered by any single one (Sorensen, 2002). Since the different laws are administered by different ministries as well, it is a common scene in Japanese planning that even the experts do not know all the regulations governing certain areas.

Here Finland stands as a polar opposite to Japan. The Finnish planning system is extremely elaborate, and one of the most severe in the whole world. In fact, Finnish zoning consists of no less than 4 different levels of plans; (in order of scale) National Land Use Guidelines (*Valtakunnalliset alueidenkäyttötavoitteet*), the Regional Plan (*Maakuntakaava*), Master Plan (*Yleiskaava*), and the Detail Plan (*Asemakaava*). These work in conjunction so that all four levels need to be in accord with each other, lest one or more must be modified so that all stand in harmony with each other again.

While the uppermost level of Finnish planning is not a map, but instead a relatively simple document of roughly 11 pages as of April 2018 listing the national goals of good land use, the three other levels are. Further, each level contains literally hundreds of different kinds of zoning markings, and each map is accompanied with a policy statement that can detail these regulations even further. For sense of gravity, already on the Master Plan -level the exact locations, colour-schemes, heights and the floor-area-ratios of buildings to be built can be regulated to quite fine detail (although this is somewhat rarely done on this level), and the Detail Plan can go to even finer detail. Further, since it is the municipal governments that approve of the plans, there are no special agreement requirements, much less the 90% citizen agreement rate that Japanese District Plans require to be instituted.



An example of Japanese zoning, city of Tamamura (玉村市), Gunma-prefecture, (www.city.tamura.lg.jp)
The area is a little bit over 2 kilometres from East to West (with *every* plot within a zone treated the same)



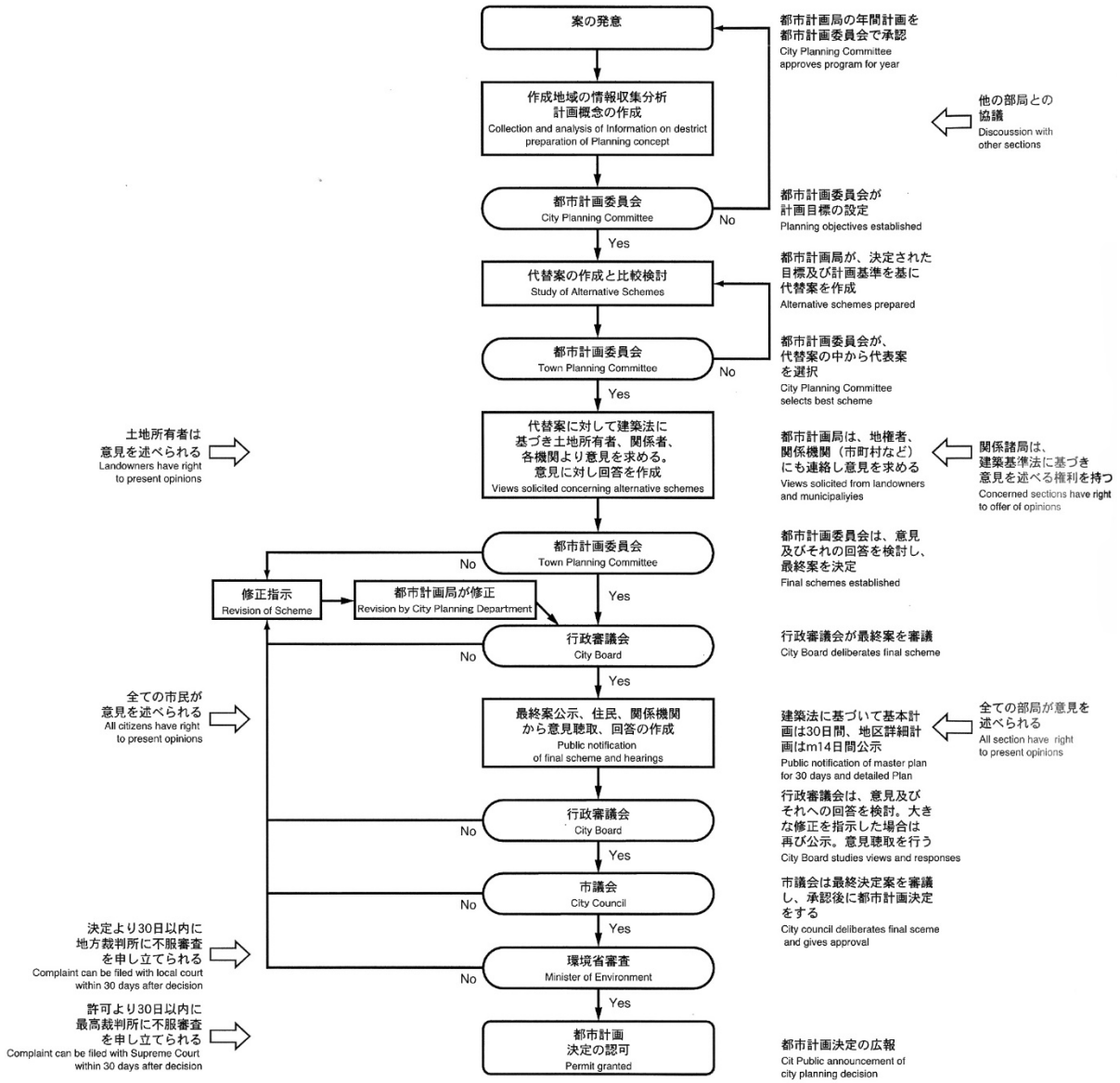
An example of Finnish Detail Plan zoning, a small piece of Detail Plan from city of Kristiinankaupunki, adapted from (www.kristinestad.fi); Every individual plot has its own regulations (notice that similar colour does *not* mean same zoning)

Streetscape in central Helsinki, Unioninkatu; (photograph by Hanna-Maria Hagberg)

Naturally, such vast power can easily heat up feelings, as the post-war reconstruction of Japan showcased. It is curious that while the general image of Japan is an extremely obedient nation, it is in fact the Japanese who have constantly fought against harsher planning regulations *as a nation*. Finns have often enough shown discontent towards how things are done, or how plans are made, but even though the general image of Finland is a quite headstrong nation, the institution of urban planning has almost never been under serious attack neither by the politicians, nor the citizens.

One of the reasons for this "quiet obedience" is highly likely the fact that small changes to the local Detail Plan can be made without approval from the City Board or Council. A small increase of floor-area-ratio, or a small change to the regulations of the plot can be accomplished with the permission of the head of the municipal department of urban planning. These actions usually need to be justified very firmly however, and can incur several somewhat heavy bureaucratic procedures, which can either cost *a lot* of money, or be almost without costs. The decision in such cases can also appear highly arbitrary sometimes, as the complicated, sometimes even Kafkaesque bureaucracy remains unclear to the common men. Such ambiguity has never been seen in a good light in Finland.

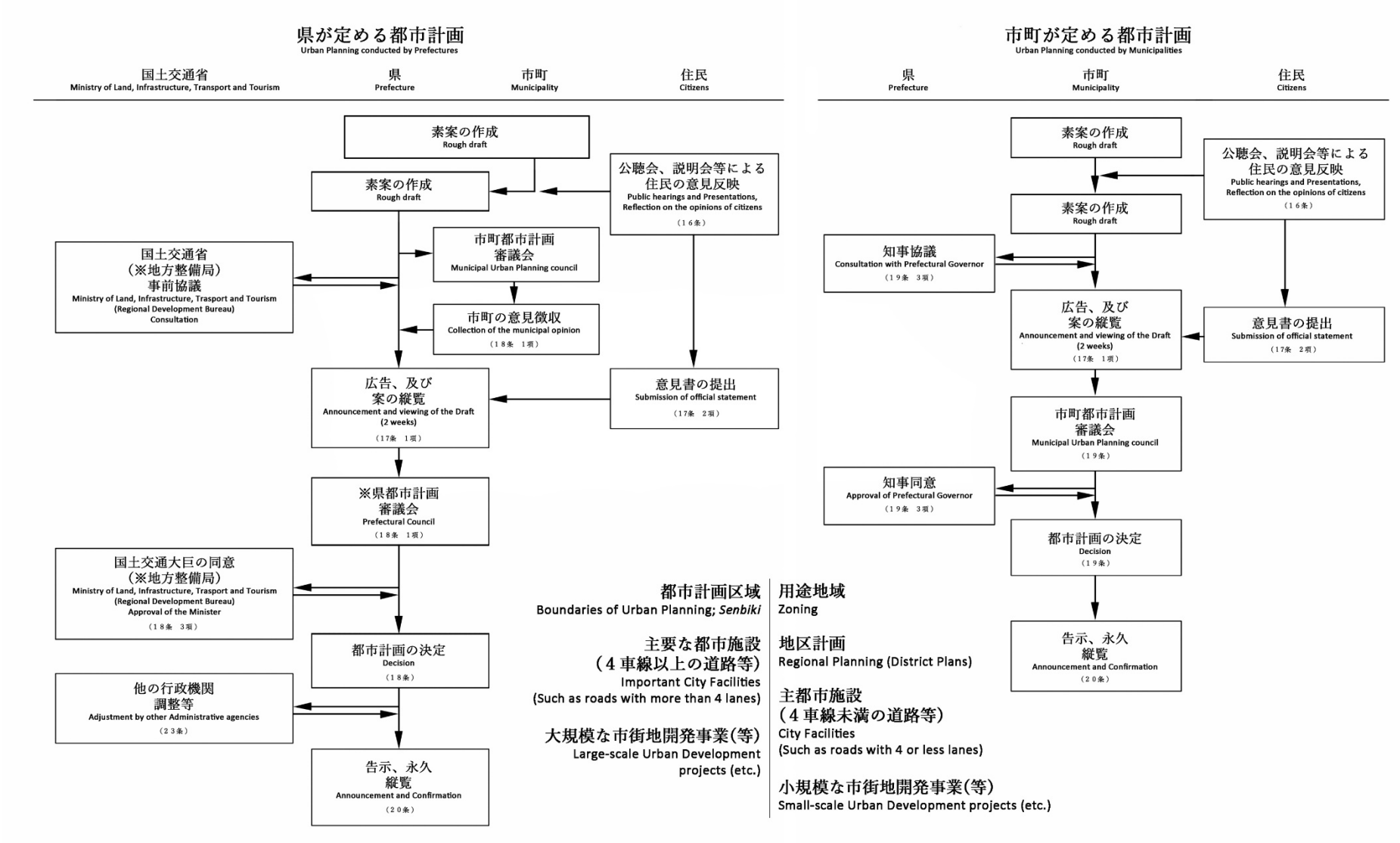
With the introduction of the Land Use and Construction Law in 2000, hopes of gaining influence on urban planning went up among the citizens of Finland. It is hard to prove with exact numbers, but in general, these hopes have been met with disappointment. Often enough the feelings of the populace after public hearings and meetings have been along the lines of *"yes, we were listened to just like the law requires, but were we really heard at all?"* While there have been many projects and urban plans with extremely successful public participation programs, these tend to have all occurred in the less populous countryside municipalities. Meanwhile, the bureaucracy and power play regarding urban planning in the big cities has become more and more top-heavy by the year (Taipale, 2009).



Flowchart of Permission of Town Planning in Finland *before* the Land Use and Construction Law before 2000; Today the plans no longer need to be approved by the Minister of Environment; diagram adapted from (Obase, 1997)

On the other hand, Japanese urban planning has been subject to heavy corruption as well as municipal powerlessness for as long as the institution has existed. The Japanese Urban Planning Law was revised in 2001, and again in 2007, now including among other things mandatory public hearings in the process of creating new urban plans in Japan as well. Nevertheless, Japanese municipalities still struggle with economic impossibilities, as land in Japan is incredibly expensive, even 30 years after the bursting of the bubble.

In Finland, because of the strong grip municipalities held over planning ever since the planning monopoly was handed over in 1958 legislation, municipalities were able to make a lot of money by first buying the land as cheap agrarian land, and then upgrading it via renewal of plans so that developers would then either buy it at a premium price, or better still, rent it for several decades at a time (Obase, 1997). While impossible for municipalities in Japan, such measures were possible in Finland for two reasons: First, Finland was much less populated and developed than Japan, meaning that there was plenty of cheap agrarian land even near downtowns, and two, there were long traditions of handing large areas of land for newfound towns in the Swedish kingdom (Sundman, 1995).



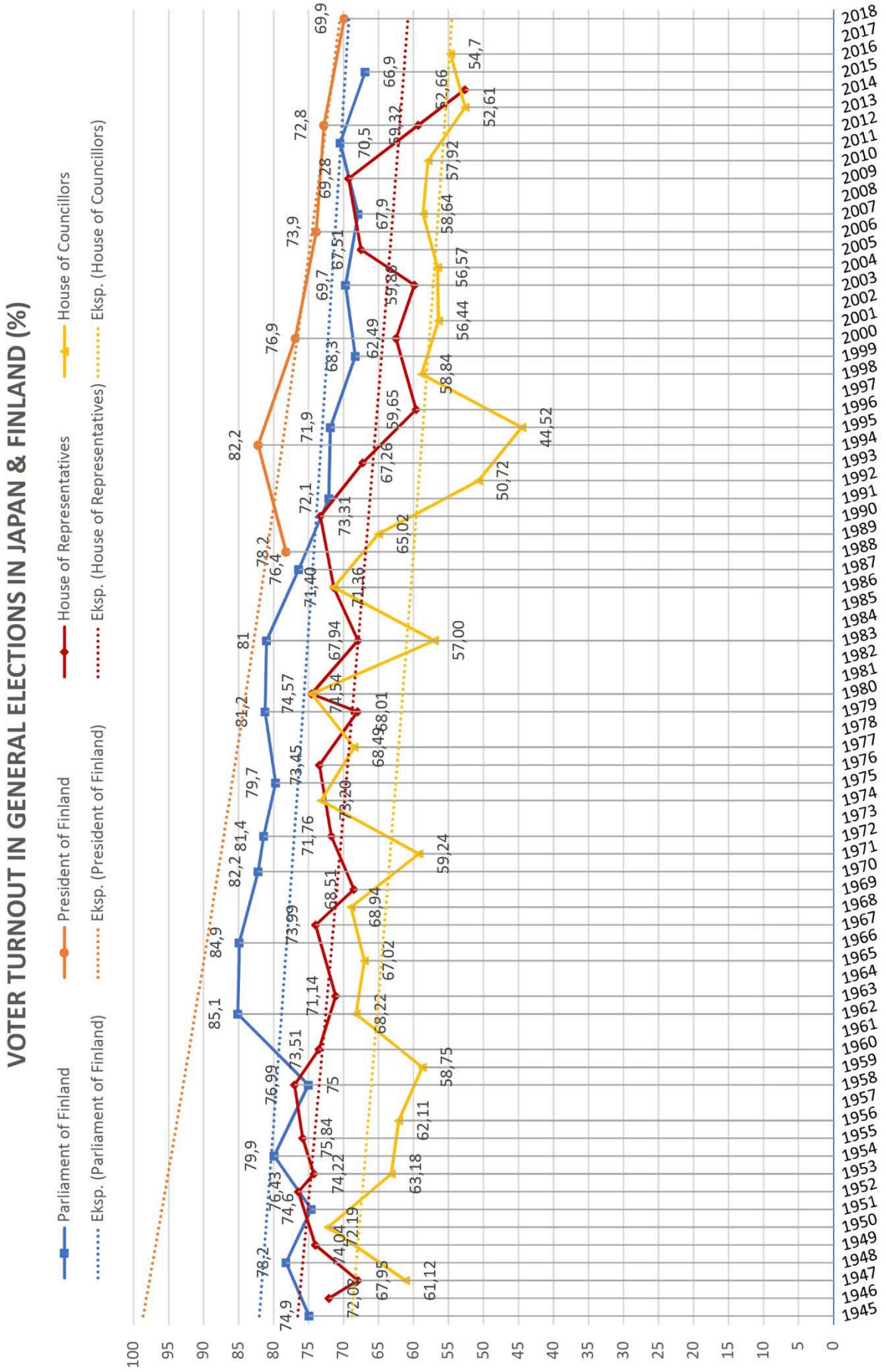
The Flowchart of Japanese urban planning,
Diagram compiled by the author from those of Osaka, Kanazawa, Echizen and Sakura

As can be seen from the above flowcharts, the process of approving plans in Finland and Japan stand in strong contrast to each other. While the general structure of first drafting a plan, then displaying it to the populace, and then proceeding to approval after revisions are made are very similar, the details are not. For instance, the amount of chances to influence the plans are at strong odds, for the Finnish system allows for commentary by the populace before *and after* the final plan has been submitted for decision by the municipality. This commentary should then be taken into account when making the decision regarding the plan. The timescales are also very different, as the right of complaint tends to be one month long in Finland, whereas in Japan the time frame for the only chance to submit commentary is just 2 weeks long.

Another clear difference is the structure of the regional and local governments. In Finland, the regional councils are not elected, but instead represented by the municipalities according to their populations and the results of the municipal elections. For example, 80 seats of the regional council of Uusimaa are represented by 26 representatives from Helsinki, 11 from Espoo, 9 from Vantaa, 3 from Porvoo and one or two from every other municipality in the Region. On the other hand, the Japanese system utilizes what is known as the "presidential system," meaning that there are separate elections for the councillors, and governors in case of prefectural elections, or mayor in case of municipalities. Already this difference between the representation of local and regional governments changes the way the councils relate to the institution of urban planning.

Nevertheless, interest in public affairs has been steadily falling ever since universal suffrage was taken into use in both nations. While the data from local and regional elections is available, there is considerable variability between different areas. Instead the change is much easier to see in the nationwide general elections, which have always been more popular than local elections in both nations due to their visibility in mass media. This fact that the voter turnout has dropped some 10-15% in all kinds of elections during the last 50 years is a major issue for worry in both nations, as it highlights the growing indifference and discontent towards the systems. Without the official approval of the entire electorate, the councils and governments cannot be expected to be able to institute major reforms without considerable resistance from the citizens. How this will be handled and resolved remains to be seen.

And thus we have arrived at the end of our narrative. Such were the last 500 years of Finnish and Japanese urbanism and urban culture. Looking back at this history, I cannot but to see the parallels that Flyvbjerg and Putnam also discovered in their studies. It strongly seems that the systems and processes of urban planning that are at work today have been steadily forged throughout the history of the nations. It now remains to see what we can learn from this comparison.



Voter turnout in general elections in Finland and Japan, 1945-2018; dataset from official statistics bureaus

Timeline

Tapahtuma (Japani)	Vuosi	(Suomi) Tapahtuma	Notes
	1520	**Swedish Kingdom** is Founded	after the bloodbath of Stockholm, Gustaf Vasa incites the pesants to rebellion; the Kingdom of Sweden is "officially" born
	1527	First *Riksdag of Sweden*	the four estates were not yet established officially, but representatives of all were invited to join
	1530		
	1540		
First encounter with Europeans	1543		the Portugese and Japanese meet for the first time, after which Portugese ships start to regularly arrive in Japan
	1543	*Mikael Agricola* & ABC-kirja	Mikael Agricola publishes the first Finnish alphabet-book, which is also the first book in Finnish ever
	1550		
	1550	*Helsinki* is founded (as the 8th city of Finland)	Helsinki is founded to compete with Reval (modern day Tallinn)
	1560		
	1570		
	1570 -95	*Pitkäviha;* the Russo-Swedish war	Sweden battles with Russia, and the Finnish peasants suffer
	1580		
Death of *Oda Nobunaga*	1582		the warlord who united Japan dies, and Hideyoshi Toyotomi rises to power
	1590		
Tokugawa Ieyasu moves to *Edo*	1590		Edo becomes a significant fortress as the Tokugawa-clan moves in
Separation Edict	1591		Toyotomi Hideyoshi decrees the profession of men herditary, and creates the foundation for the four castes
Japanese invasion of Korea	1592 -98		The invasion ultimately fails due to death of the mastermind, Toyotomi Hideyoshi
	1596 -97	*Nuijasota;* Cludgel War	civil war in Finland (Sigismund of Poland vs. Kaarle IX of Sweden)
Death of *Toyotomi Hideyoshi*	1598		the man who completed the unification of Japan dies
	1600		
Battle of *Sekigahara*	1600		the deciding battle which ended the Sengoku-period; Tokugawa Ieyasu takes control of Japan
	1601	*Olkivuosi*	one of the worst bad years in Finnish history
Beginning of the *Edo*- period	1603		Edo becomes the de-facto capital of Japan under Tokugawa Ieyasu, even though the Emperor still resides in Kyoto
	1610		
	1611 -32	*Gustavus Adolphus* ascends to the Swedish throne	the warrior-king who lay the foundations for the Swedish empire; A protestant king
The Four Castes of Japan are finalized; *Buke Shohattō*	1615		Tokugawa Ieyasu finalizes the Japanese castes, which are in order of importance; Samurai, Peasants, Artisans, Merchants
	1617	*Riksdag Ordinance,* and The Four Estates of Sweden	the Riksdag and the estates (in order of importance; Nobility, Clergy, Burghers, Peasants) are finally officially organized;
	1620		
	1630		
Sakoku -edict	1635		outsiders are benned from entering Japan and Japanese from leaving Japan on pain of death
	1637 -40	*Per Brahe* as Governor-General of Finland	the beginning of "Kreivin aika," or the "Time of the Count;" numerous reforms unify Finland greatly
	1638	Finnish Postal service begins	one of many reforms instituted during the "Time of the Count"
	1638	*Maavero;* trade in countriside is restricted	peasants are forbidden from selling their produce outside of marketplaces in towns
	1640		
	1640	*Royal Academy of Turku* is founded	first university of Finland is founded
Great *Kan'ei* Famine	1640 -43		due to increased spending, and several bad years, agriculture suffered from reduced harvests
	1648 -54	*Per Brahe* as the Governor-General of Finland again	continuation of "Kreivin aika," or the "Time of the Count;"
	1650		
The Great Fire of *Meireki* in *Edo*	1659		the deadliest fire to ever occur in Edo, killing over 100 000, a fourth of the city population
	1660		
	1670		
	1680		
	1690		
	1695 -97	*Suuret kuolonvuodet;* The Years of Death	the worst bad years in Finnish history; nearly every third Finn dies of hunger or disease
	1700		

	1700	*The Great Northern War* begins	Charles XII of Sweden defeats Peter the Great in the First Battle of Narva
	1710		
	1710 -11	Plague in the North	
	1713	Russia occupies Finland	as Charles XII is forced to retreat to Turky in the Great Northern War, Russia occupies Finland
	1714 -23	*Isoviha;* or "the Great Hatred"	Russians occupying Finland dicipline Finns increasingly harshly
	1720		
restrictions on western books are lightened; *Rangaku*	1720		Rangaku means learning from the Western literature; especially medicine and technology are popular subjects, although not only ones
Edo becomes the biggest city on Earth	1720'		population is estimated around 1,1 million
	1730		
	1740		
	1742	Russia occupies Finland again	consequence of the Swedish-Russo-war (hattujen sota) (1741-43), and was followed by the "Pikkuviha"
	1742 -43	*Pikkuviha;* or "the Small Hatred"	
	1750		
	1757	*Isojako;* Great Partition in Finland	land reformation initiative by Jakob Faggot, instituted according to the English model; peasant villages and communities are fragmented
	1760		
	1770		
	1771	Finland's first newspaper is published	
The Great Fire of *Meiwa*	1772		
	1775	Sales of grain is liberated in Finland	the ban on "maakauppa," meaning prohibition on trade in the countryside starts to dissolve via liberation of grain trade
	1776	The first newspaper in Finnish is published	
American Indipendece	**1776**	**American Indipendence**	
	1780		
The Great *Tenmei* famine	1782 -88		bad economic policies depleat food reserves, and bad years wreak havoc
The French Revolution	**1789**	**The French Revolution**	
	1790		
	1800		
	1808 -9	*Finnish War*	the end of the Swedish Empire
	1809	*The Diet of Porvoo* & Grand Duchy of Finland	Grand Duchy of Finland is instituted, time of Autonomy begins
	1810		
	1812	*Helsinki* is made the capital of Finland	
	1816	*Carl Ludvig Engel* & *Helsinki*	redesign and rebuilding of Helsinki
	1816 -1918	*Senate of Finland*	Senate of Finland was the de-facto cabinet and supreme court in Finland during its time
	1820		
	1827	*The Great Fire of Turku*	the most devastating fire in the Nordic history; the gridiron plan becomes the most popular urban form
	1828	*Royal Academy of Turku* is moved to *Helsinki*	the Royal Academy of Turku is relocated in the new capital, Helsinki; it is renamed as the "Imperial Alexander University in Finland"
The Great Fire of *Bunsei* in *Edo*	1829		the most destructive fire in Edo materialwise
	1830		
Great *Tenpō* famine	1833 -37		one of many incidents that made the Edo-Bakufu look weak towards the end of Edo-epriod
	1835	*Kalevala* is published	Kalevala is published by Elias Lönnrot
	1840		
	1842	Trade in countryside Finland is liberated	prohibition on trade in the countryside is fully liberated
	1848	*Uusjako;* "land consolidation" in Finland	Isojako, the Great Partition is complemented with a new act
	1850		
Admiral Perry and his Black Ships	1853 -4		Isolation of Japan ends, and Japan is opened to the rest of the World
The Great Earthquake of *Edo*	1855		last of the three great Ansei-earthquakes; roughly 50 000 buildings and 50 temples were destroyed
	1857	Steam sawmills are permitted in Finland	
	1858	First *köping* (*Kauppala*) of Finland is founded	Ikaalinen; a "municipal köping"
	1860		
	1862	Private Banking begins in Finland	
	1862	The first railway-line in Finland is opened	Helsinki-Hämeenlinna
	1863	Second *Riksdag of the Estates of Finland* convenes	By decree of Tsar Alexander II, the Diet of Finland convenes again after 50 years, and from this point on it is required to convene regularly

	1865	*Municipal Act* of 1865 in Finland	mundane duties of Parishes are given to the rural municipalities (maalaiskunnat); duties of the state are moved hierarchically downwards
	1866 -68	*Nälkävuodet;* Finnish famine years	last great famine in Finland, roughly 8,5% of the entire population starves to death
Boshin -war	1868		The war that starts Meiji-restauration
Meiji Restoration	1868		Beginnig of the Meiji-period; The Emperor moves to Edo, and Edo is renamed Tokyo, the "Eastern Capital"
	1869	*The Four Estates* are disabled	
	1870		
Prefecture Act in Japan	1871		old han-domains are abolished, and the new Prefectures take their place; from daimyo to governors
The *Four Castes* of Japan are slowly disbanded	1871 -73		
First railway-line in Japan is Openend	1872		Shinbashi-Yokohama
Devastating fire in Tokyo; *Ginza*	1872		new, "European" brick-town is begun in Ginza
	1873	Finnish cities and towns recieve more responsibilities	duties of charity and education are also taken from the clergy, and given to the cities
Meiji Land Tax Reform	1873		landowners become the taxpayers instead of farmers; it is also no longer possible to pay taxes with crops
	1880		
Cabinet decision-making	1885		Cabinet decision-making is introduced; preparation for the coming Meiji Constitution
Tokyo City Improvement Ordinance	1888		Haussmann's Plan for Paris is used as the model
Privy Council	1888		Privy Council is formed; preparation for the coming Meiji Constitution
	1890		
Meiji Constitution goes into effect	1890		The constitution took a decade of careful planning, and the power stays firmly with the Genro-statesmen
Japan invades Taiwan	1895		
	1899	Act for "dense communities" in Finland	"taajaväkinen yhdyskunta" is one of three types of municiplaities in Finland until 1977
	1899 -05	*Ensimmäinen sortokausi;* The First Oppression	February manifesto; Russia tries to cement its presence, and tries to "russify" Finland with numerous measures, including conscription
	1900		
Public Order and Peace Law; *Chian Keisatsu hō*	1900		political activity is banned from minors, women and memebers of military and police; strikes and gatherings of over 5000 people are outlawed
Japanese-Russo War	1904 -05		War between the Russian and Japanese empires, Japan prevails and recieves areas from Russia
	1904	Assasination of General-Governor *Bobrikov*	General Governor Nikolay Bobrikov was shot by nationalist Eugen Schauman in retalliation to the oppression
	1905	Russian revolution	
Nationalization of most private railways	1906 -07		Most private railways were nationalized, and private railway corporations were denied developing intercity-lines
	1909 -14	*Toinen sortokausi;* The Second Oppression	continuation of the First opression; Russia tries to "russify" Finland with numerous measures
	1910		
Annexation of Korea	1910		Annexation of Korea is completed
First World War	**1914 -18**	***First World War***	
	1915	*Munkkiniemi-Haaga plan*	visionary plan for Helsinki by Eliel Saarinen is published
	1917	*Russian revlution(s)*	end of Tsarist Russia, and eventually the birth of the Soviet Union under Bolshevik government
	1917	**Finland**	Finland declares itself Independent, and the Bolshevik government recognizes this
	1918	*Sisällissota;* Civil War in Finland	
	1918	*Torpparilaki*	corfters (torpparit) are given the chance to buy their lands for themselves at any given time
The City Planning Law; *Toshi Keikaku hō*	1919		consisted of 5 different laws; Urban Buildings Law, Zoning, Building-Line, Public Facilities and Land Readjustment (LR)
	1920		
League of Nations	1920	League of Nations	League of Nations is founded to prevent the world from deteriorating into another world war, a mission in which it ultimately failed
	1921	*Oppivelvollisuuslaki;* Compulsory education	6-year elementary education is made complusory in Finland
	1922	*Työsopimuslaki;* Employment Law	an annual holiday of minimum 7 days was decreed, and this was extended to 9-12 days in 1939
The Great Kanto Earthquake	1923		Tragically only few weeks before the new Plan for Tokyo was about to be published; rebuilding of Tokyo begins
Showa Financial Crisis	1927		following the economic slowdown and the Great Kanto earthquake, 36 banks go bankrupt along with *Suzuki* , the second biggest *zaibatsu*
Crash of Wall Street	**1929**	***Crash of Wall Street***	**Unsteady times all around the globe**
	1929 -34	The Great Depression	the great depression of the 30's was not in fact caused by the crash of Wall Street
	1930		
Japan invades Manchuria	1931 -32		Japan invades Manchuria, ultimately instituting a puppet state
	1932	Finnish City Planning Law	"Asemakaavalaki;" modelled after the 1907 City Planning law of Sweden; planning powers of cities are greatly enforced
	1940		
Second World War	**1939 -45**	***Second World War***	
Japan surrenders unconditionally	1945		rebuilding of Japan begins

	1945	*Maanhankintalaki;* Land Acquisition Act	redistribution of almost 2,8 million hectares of agrarian land to provide new homes for the refugees from the ceded areas
Constitution of Japan goes into effect	1947		the new constitution of Japan that the American forces oversaw goes into effect
End of the *Home Ministry*	1947		the central Home Ministry is abolished for unwillingness to accept the new regime, and three different ministries take its place
Repairing the road network of Japan is finished	1949		compensations for compulsory acquisitions are bad; planning becomes a curse word among landowners
	1950		
Building Standards Law; *Kensetsu Kijun hō*	1950		replaces the old Urban Buildings Law of 1919; city planning remains unaltered *except* for the removal of the Building-Line system
	1952	Summer Olympics in Helsinki	Finland showcases itself as a new and modern nation
Land Readjustment Law; *Kukakuseiri*	1954		a revision and an enchantment of the 1919 Land Readjustment system; for ex. area for parks and sewerage needs to be put aside as well
The explosive growth of Japanese metropolises	1955 -65		within a decade, roughly 5,5 million people move in to Tokyo, Nagoya and Osaka areas
	1956 -82	*Urho Kalevi Kekkonen* becomes the President	Kekkonen served as the president of the republic for 4 terms, one of which was extended; his policies were extremely Russia-oriented
	1956	General Strike in Finland	regulations on fares and wages end, and prices go up; in the end, 6-10% rise in wages is achieved
	1958	*Rakennuslaki;* The New City Planning Law	a revision of the old City Planning Law, or "Asemakaavalaki" of 1932; municipalities recieve monopoly on drafting plans
	1958	*Yöpakkaset;* Night Frost Crisis	The relationship between Finland and Soviet Union grows worse, and to make up, the Finnish government is forced to resign
	1959	Status of Cities in Finland	new towns (1959->) do not have as many responsibilities as old ones (for ex. Magistrate)
	1960		
	1961	*Noottikriisi;* Note Crisis	Soviet Union demands Finland to join forces due to situation in Germany; the Finnish government is again forced to resign to make up
Low-quality housing industry in Japan	1961 -65		problems of accelerated urbanization are pushed to the private markets; the results are obvious
Summer Olympics in Tokyo	1964		Japan can finally showcase itself as a nation that has left the past behind
New City Planning Law; *Toshi Keikaku hō*	1968		municipalities are not given the planning monopoly, nor does the plan even need to be ratified by the municipalities
	1968	Plans for Urban development become obligatory	Master- and Detail plans become remarkably more powerful planning tools as they become obligatory in all Finnish municipalities
	1970		
"Big Four" -court cases	1972		Four big court cases agaist polluting the environment are all decided in favour of the residents
	1977	*Kunnallislaki;* Uniform municipal government	*almost* uniform form of municipality; the act was modelled after a 1971 act in Sweden; city priviledges cease to be
	1980		
District Plan is taken into use; *Chikukeikaku*	1980		modelled after the "Bebauungsplan" (Germany) and "Stadsplan" (Sweden)
	1990		
The Cold War ends	**1991**	***The Cold War ends***	**Cold War; 1945-1991**
	1991	Collapse of the Soviet Union;	Soviet Union collapsed, and was gradually divided into 15 different countries.
Japanese bubble burst	1991		Japanese bubble bursts, and "the Lost Decade" begins
	1991	Bank Crisis & Regression	Finland enters into an almost decade long regression
Additions to City Planning Law in Japan	1992		zoning is increased to 12 different kinds of zones +special zones
	1995	Finland joins the European Union	European Union was created in 1957, and in the aftermath of the collapse of Soviet Union, many Eastern European nations join the Union
	1995	Additions to the Municipal legistlation in Finland	
	2000		
	2000	*Land Use and Construction Law*	"Maankäyttö ja Rakennuslaki," a revision of the New City Planning Law, or "Rakennuslaki" of 1958
	2000	New constitution	The powers of the President are greatly reduced
Revision of the City Planning Law	2004		responsibilities of municipalites in informing the citizens are increased, thus hoping for more public participation
	2010		
Tōhoku Earthquake	2011		Tohoku Earthquake and the Fukushima incident

Discussion

"We are living in space-age times with stone-age minds"

Daryl Davis, *Accidental Courtesy* -documentary, 2017

While various exciting things have happened during the past 20 years, it is the long road that took us here that we are interested in. Based on the previous narrative, and the theory behind the cultural evolution introduced in the second chapter, it would in fact be somewhat dubious to think that the latest generation alone would have changed much in terms of the underlying urban culture. Putnam argued the long arm of tradition to reach over 1000 years of history in Italy, and Flybjerg confirmed at least 500 years of tradition of urban planning still holding strong in Denmark (Putnam, 1993) (Flybjerg, 1998). And, although only implicitly, Sorensen showcases Japan to be not so much different; old traditions holding incredibly strong, even when they are in fact obsolete (Sorensen, 2002).

In this final chapter I will recap the striking similarities between Japan and Finland, as well as the notable differences. I will then discuss possible explanations for these differences in light of the similarities and the historical developments. Frankly speaking, there seems to be only truly significant difference that could explain the vast differences. Finally, based on these findings, I will venture a little, and muse about the current and future generations, and why their culture is probably going to be vastly different from previous ones.

Similarities

In the very beginning we asked a question; is there something we can learn from comparing two so fundamentally different nations and cultures? Certainly, for the similarities between the histories of Japan and Finland are striking to say the least. I hope that this thesis has been able to prove that plentifully. By understanding these, and the differences in their light, we can finally draw some conclusions. In terms of history and urban fabric, there are 5 major similarities, which are (1) long isolation, (2) wooden cities, (3) timing of the industrial revolution, (4) loss in the second world war, and (5) the long-term economic development. These five aspects are naturally interconnected, but it is still worthwhile to consider them individually, because they constitute the foundation of coming urban cultures.

(1) Long Isolation

Edo-period Japan is a unique event in world history. Never has a nation been so able to completely shut itself off from the rest of the quickly globalizing world for almost 3 full centuries. The ancient cultures and populations could be argued as similar instances of cultural isolation, but Edo-period is vastly different in that it happened so recently, from 1603-1860's. If we consider culture to be a feedback-loop-system of the individuals and the extelligence between them, this creates a massive cycle of introverted cultural evolution. As was mentioned above, cultures really require other cultures for good stimuli to evolve further. During the *sengoku*-period, the civil war of Japan preceding Edo-period, such cultural evolution was at the height of its vigour, with carpenters and craftsmen coming in from all over eastern Asia to develop some of the mightiest advancements in land-warfare of the time (Koichi, 2005). However, with the *sakoku*, sealing of the country, such outside stimuli were non-existent, and what we today consider quintessentially Japanese qualities started to refine themselves. Granted, the authorities and the esteemed families did study western culture dedicatedly, but this remained insignificant stimuli, as it never reached the masses. On the contrary, the people in charge took great pains to keep such stimuli out of the country.

Typical Finnish residential townscape; Tontunmäki, Espoo (photograph by Hanna-Maria Hagberg)

Typical Japanese residential townscape; Komaba (駒場), Tokyo (photograph by the author)

Finland was essentially the same, although for very different reasons. Finland was, and in fact still is relatively sparsely populated country. Without modern information and communications technology, news took their time to reach the inland Finns. Without modern logistics, it would sometimes take months if not years to move from the coast to inland villages, and the sea froze most years, which further prevented active interaction with outside powers. Until the separation from Sweden in the beginning of the 19th century, Finland was often thought of as an eastern buffer-zone towards the Russians, and little more. Taxes were collected, men were conscripted to serve in the numerous wars Sweden fought, and several major legal reforms were instituted, but ultimately, the land and its people were left largely undisturbed. Especially the eastern and northern parts of inland Finland were basically a wilderness. Even further, significant proportions of the burghers and townspeople in the coastal towns were effectively foreigners; mostly Swedish with some Dutch, Germans and Russians, among others (Hurme, 2017). This created ample grounds for the quintessentially Finnish culture to evolve in isolation until the mid-19th century, in effect very much like the case was in Japan as well.

Further, the major legal reforms in both countries had surprising resemblance; The four estates of Sweden were decreed in 1617 act, which was ultimately replaced in Finland only in 1869. Similar act that established the four castes in Japan was issued in 1591, and was clarified and further enforced in 1615. This law was finally dissolved during 1871-1873. Laws regarding taxation, population censuses, land reforms and so on were also issued in almost lockstep, but ultimately these have little effect as the big reforms are coming later, together with the big upheavals of the 19th century.

This long cultural isolation is not the first major similarity between Finnish and Japanese histories, but it is perhaps the most important one in understanding why Japan and Finland are so eccentric when compared with other cultures and nations, even neighbouring ones. As has been mentioned often enough, while the two cultures are severely different, there are also numerous uncanny similarities.

(2) Wooden cities

Japanese and Finnish cities were made almost exclusively of wood. Stone buildings were very rare, although again for different reasons. This naturally meant that fires were literally devastating in urban environments. Quite frequently even entire cities and towns were completely levelled. Likewise, the culture of rebuilding was fast and efficient, and the vernacular architecture evolved to adapt to this. An interesting difference is that when Finnish towns burnt down, the destroyed town could sometimes, depending on the significance, be abandoned where it lay burnt, and be entirely rebuilt some kilometres away in one direction or the other. In Japan, the area that was razed was sometimes ordered to stay cleared as a firebreak, but it rarely did for long. This resulted in varied specialization in wood architecture, such as *kigumi* (木組み), the 'nailless architecture' of Edo-period, or *piiluaminen,* a technique where a log house is made significantly more weather resistant without any coating whatsoever, among many others.

If the inspection is made in raw quantity alone, Japan has clearly had a share of much more destruction than Finland. However, if the difference in population is considered, the story starts to look quite different. If we compare Turku and Edo during the 18th and 19th centuries, the extent of destruction suddenly starts to look somewhat similar. The worst urban fire in Nordic history, the Great Fire of Turku in 1827, destroyed over three quarters of the city, levelling 2 543 buildings, killing 27, and leaving over 11 000 people homeless (Suikkari, 2007). There are no exact records of the population of Turku around the time, but since the population has been estimated to roughly 11 000 in the beginning of the century, between 13 000 and 15 000 seems to be a fair guess. Respectively, after an explosive growth during the 17th century, the population of Edo had settled around some 1,1 million people in 1721, and this figure hardly changed throughout the rest of the period.

Thus, to match the destruction of the Great Fire of Turku, some 200 000 buildings would need to be burnt in Edo to get close to the amount of destruction per person. Unsurprisingly, such destruction was seen but once in the history of Edo, in 1829, when some 370 000 buildings were damaged during the Great Fire of Bunsei (*Bunsei no taika;* 文政の大火). Curiously, the number of casualties was roughly 2800 dead, where the required number to match the deaths in Turku would have been 2000. As it happens, this is the only fire in Edo to match the complete destruction of the Great Fire of Turku. The rest are considerably smaller, with typically some 20 000 or so buildings damaged, and between few hundred and few thousand dead each time. This again coincides with the average size of fires in Turku, which tended to damage about one fifth of the city, around 400 to 500 buildings (Suikkari, 2007). If put in relation with the population of Edo, this would amount to around 30 000 buildings.

One massive fire deserves a special mention, even though the degree of its material destruction was not recorded. The Great Meireki Fire (*Meireki no taika;* 明暦の大火) of 1657 killed more than 100 000 in a city that had roughly 400 000 people living in it in the 1640's. This is regarded as the worst fire that has ever hit Edo.

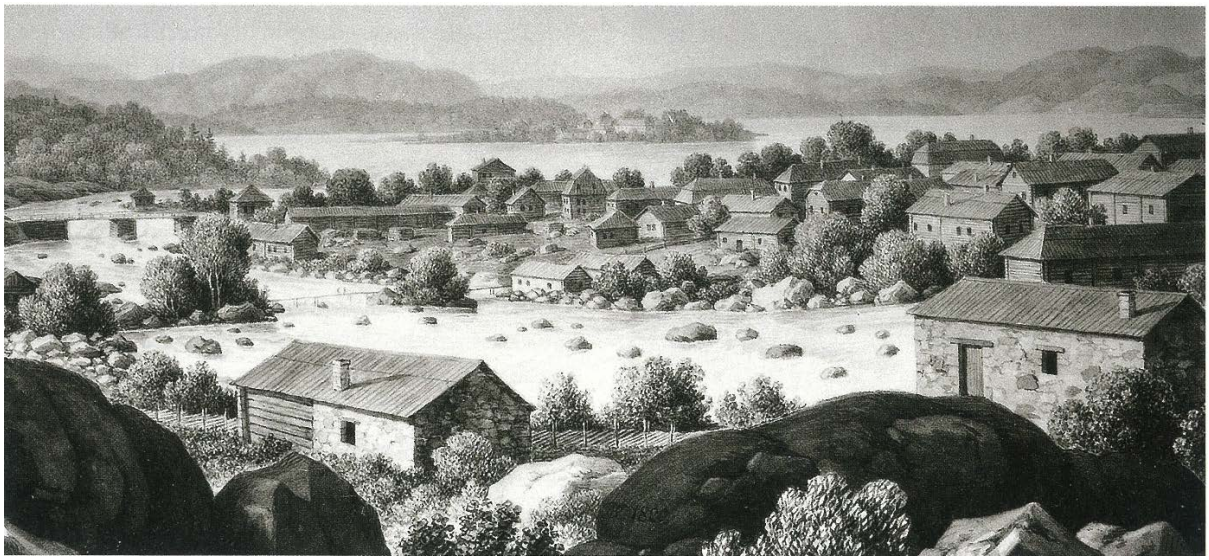
Obviously, this manner of mathematics hardly proves anything. The destruction a fire wrecks in a city hardly correlates with the population. If anything, fires should be more common in a more populous city. In terms of urban structure, Japanese cities were considerably more tightly packed than Finnish ones, meaning that fires would spread more efficiently. The streets in Turku were 7,2 to 11 meters wide in 1827 (Suikkari, 2007), whereas in Edo the alleys would usually have been less than 4 (Sorensen, 2002). This in turn explains the higher destruction- and death-rates of fires in Edo. In fact, weather, traditions, lifestyle, vernacular architecture, fire brigades, overcrowding, readiness to abandon one's home, etc., would all influence the devastation of a fire. Simple size of the population in turn does not.

However, when considering the culture of urban renewal, it seems fair to make this kind of shallow inspection at how used the urban populations were to this kind of destructive phenomena, and to what extent. Thus, speaking in terms of history, considering that cities in both nations typically burned to the ground several times, it seems that both the Finnish and Japanese urban populations faced a very similar threat and destruction in urban fires. *regardless* of the existence of earthquakes in Japan.

On a final note, stone buildings and fire-proofing started to develop in both nations roughly simultaneously as well. Finland did have a history with stone and brick buildings, but it was very much concentrated in Vyborg, whereas the first brick buildings of Japan were developed in the Ginza brick town (*Ginza rengagai;* 銀座煉瓦街) of 1872. Come 20th century, and the devastating urban fires had suddenly become a thing of the past in both nations (Sorensen, 2002) (Suikkari, 2007).

(3) Timing of Industrial Revolution

Industrial revolution is often considered to have begun during 1760's in Europe, and ended in the mid-19th century. However, both Japan and Finland were extremely rural and primitive during this period. Japan was still in the middle of Edo-period isolation, and Finland saw the entrance of manufacturing industries only in mid-19th century. This coincides with the 1868 Meiji restoration, which brought foreign powers, international trade, and manufacturing industries to Japan as well. Again, we are effectively within a single decade of the same major societal development occurring in two nations almost on opposite sides of the globe. Even further, both nations embraced this new international development rather late in terms of world history, basically only after it had taken place elsewhere. It could even be argued that Finland and Japan were among the last nations to experience industrial revolution, for neither was a colony, and Finland was an "autonomous principality." It is worthwhile to remember that more than 80% of the globe had come under control by European nations in 1914.



Tampere, today the third largest urban area in Finland, in 1818 (population roughly 1000);
part of an Ink wash by Carl von Kügelgen, adapted from (Kärki, 2014) (b)

Japan of the time had much more economic muscle than Finland did, and capitalistic imperialism quickly took a strong foothold in Japan. This was largely due to the nature of the Meiji restoration, which had brought the merchants to the forefront of politics. This in turn greatly increased the rate of urbanization. During the First Wold War Japan had already been manufacturing significant amount of munitions and war materiel for Great Britain. On the other hand, despite the promising start Finland had had, the First World War had a regrettable hindering effect on the growth, mostly because of the losses the Russian Empire had incurred. However, with independence and a change of markets, Finland was able to keep on growing. The foreign trade consequently fragmented, and England, Sweden, Germany, USA and Russia (Soviet Union) among others took turns in having the leading role. Almost like a homage to their respective histories, Japan relied heavily on textiles and Finland forestry and wood as imports.

Together with the industrialization, railroads and mechanized logistics and transportation also started to develop quickly. The first railroad was opened in 1862 in Finland, and in 1872 in Japan. Despite the quick advancements in technology however, both societies remained effectively agrarian until after the Second World War. Half of the population of Finland was tied to agriculture in 1940's, and only about a quarter to one third lived in urban areas (Sundman, 1991). Likewise, roughly half of Japan was tied to agriculture in 1940's, with about one third living in cities (Sorensen, 2002). It is of course worth remembering, that the definition of "urban areas" was quite different in the two nations, but nevertheless, the structure of the two societies is again uncannily close.

(4) Axis-powers

Both nations were also fighting on the same losing side in the Second World War. The effects of losing the war were somewhat different, as Finland was able to sue for peace with Russia before complete devastation. Japan on the other hand fought to the bitter end, until most big Japanese cities lay razed to the ground. Whether Japan could or could not have sued for peace while the empire was at its largest is an interesting hypothetical question, but ultimately irrelevant as this did not happen. Further, the appalling quality of the Russian bombers saved Finnish cities, especially Helsinki, from fire and devastation. American bombers however had much better accuracy *and* more chances to try.

Nevertheless, while the circumstances were different, the consequences were almost identical, both Finland and Japan underwent post-war economic miracles, which industrialized and urbanized both nations thoroughly. Finland needed to pay enormous war reparations to Russia, and though Finland would have wanted to pay in wood, the time-honoured speciality of Finland, Russia demanded mostly technical materiel, such as metal products. This demanded quick industrialization, which then facilitated intense urbanization around the new industries. Similarly, after the first phase of trying to reform Japan, the United States changed course, and wanted to restore the Japanese economy as quickly as possible to prevent the spreading of communism in the Far Eastern Asia. As a result, Japan became a nation hell-bent on economic development, which also facilitated quick industrialization and extremely intense urbanization.

Both nations also needed to concede significant amounts of land, and to accommodate large amounts of homeless war-refugees. Some were soldiers returning from the fronts, some were inhabitants of the conceded areas, and some had had their homes destroyed in the war, either by the enemy, or by their own forces as defence against enemy attacks. This initiated significant construction-projects in both nations. Again, the absolute numbers do not match very well, with Japan far ahead of Finland. However, if the numbers are again compared to the populations, the correlation becomes clear:

Finland needed to accommodate over 400 000 refugees from the conceded Karelian provinces, and overall, over 11% of the Finnish nation was without a home (Vahtola, 2003). Since the 1945 populations of Finland and Japan were roughly 3,8 and 71 million respectively, the corresponding number of homeless in Japan would have been roughly 7,5 to 8 million. As it so happens, the number of homeless in Japan was roughly 9,8 million (Sorensen, 2002). Thanks to the differing cultures and degrees of damage, and perhaps mostly because Finland had to mainly *relocate* people whereas Japan mainly needed to *rebuild* destroyed homes, from this point on the rebuilding was undertaken differently in both nations. Nevertheless, the parallels are again surprisingly clear.

Ukiyo-e “Mishima” (三嶋)” from “The 53 Stations of Tōkaidō” by Utagawa Hiroshige (歌川 広重), in 1841-1844; Typical Japanese urban structure of Edo-period, right before the Meiji Restoration (Wikimedia Commons)

(5) Long-term economic development

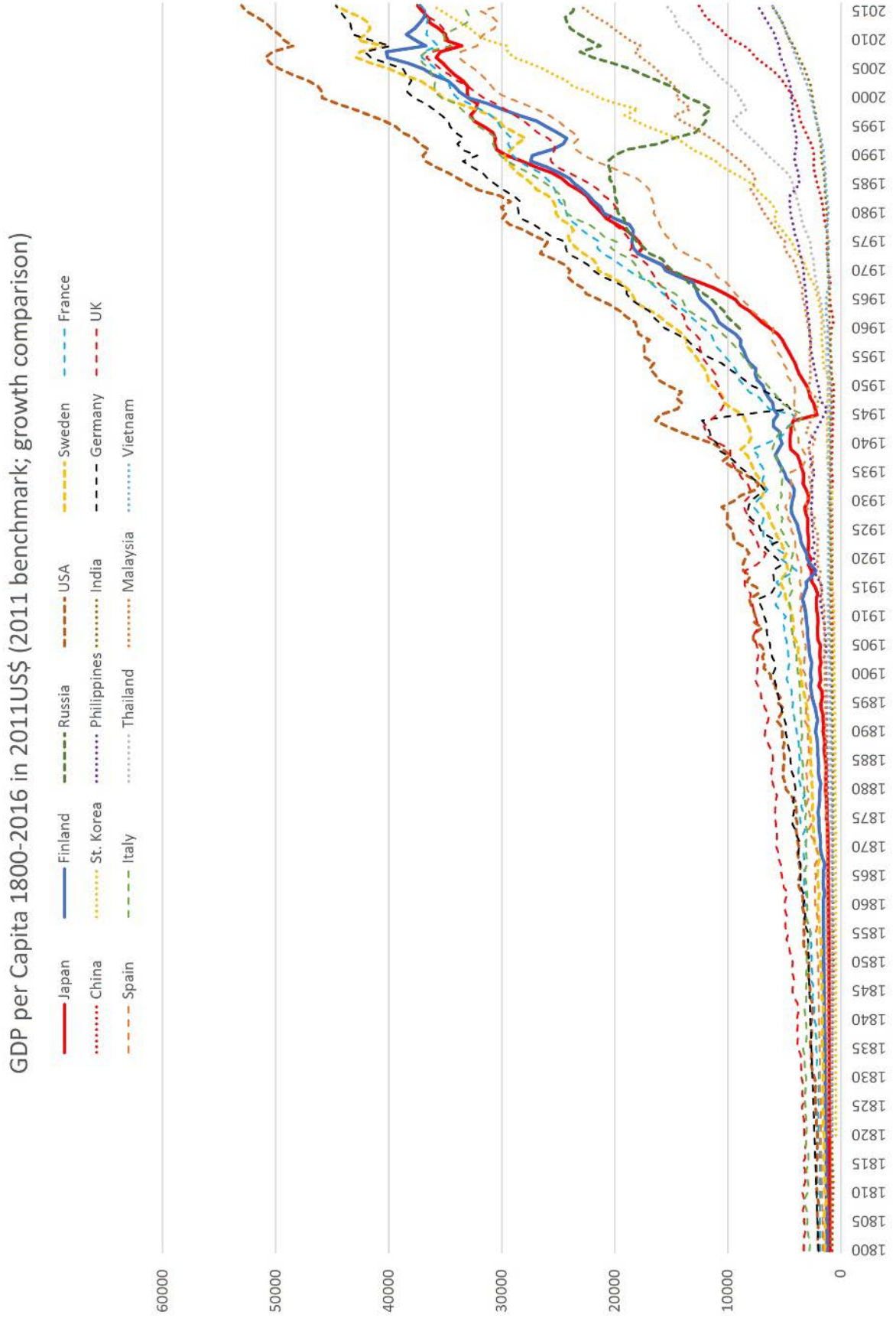
This final topic was covered briefly in the Introduction-chapter, but it is simultaneously perhaps the strongest argument, and the most convincing evidence of all the similarities between Japan and Finland. The two nations are fundamentally different on many layers, but in terms of wealth per citizen, Finland and Japan have been very much alike on the average. There have been times when this has not been the case, perhaps the most striking moment is directly after the Second World War, when Finnish GDP per capita was almost thrice that of Japan. However, Japan recovered in just two decades, and by 1970 the figures were again identical. Despite the difference in timing of these bumps, the economic development of Finland and Japan resemble each other like no other pair of Western and Eastern countries do. Italy and Spain are the closest to these two, but a closer inspection proves that Italy had at least double, if not triple the GDP per capita of Japan or Finland over centuries before 1900, and that Spain's figures were roughly double before 1900, after which they fall clearly under the two. This hardly makes for a good comparison.

While the graph on the next page may look like the one introduced in the introduction, this is a slightly different one. Taken from the same dataset, this graph is based on 2011-benchmarked data, which the Maddison Project suggest is good for cross-country growth comparisons. While the distance between the graphs of Finland and Japan has grown a tiny bit, the difference between the pair and the rest of the graphs has widened much more clearly. This is even further evidence that in terms of growth, Japan and Finland truly are the best possible pairing between an eastern and a western nation in a comparative study.

Without delving too deep into the details, the important point to understand is that if national and political economics, as well GDP per capita, have any parallels with the development of the nations as it is claimed that they do, then any difference between Finland and Japan that could have been born from relative prosperity or poverty should either be non-existent, or relatively limited at best. Yet, at this stage of this thesis it is well known that there was at least a clear difference between the Finnish and the Japanese domestic economies, so clearly that development could not have been induced by differing economic constraints. In other words, differences in development of Finland and Japan must have had other causes than the relative stage of development itself.

Differences

It should now be established that Finland and Japan are surprisingly similar. Nevertheless, the two countries have evolved in completely different directions. In fact, when first glanced over, Japan and Finland could not be more different; Japanese are usually short, with black hair and brown eyes, whereas Finns tend to be big and sturdy, with blonde hair and blue eyes. The Japanese society is often referred to as 'rigid' and 'vertical,' whereas the Finnish society is often referred to as 'horizontal' as well as 'adaptable' if not 'malleable' even. Finland has a very stable climate with harsh winters, whereas Japan has one of the most unstable environments imaginable, although with very mild winters. For a sense of scale, roughly every fifth earthquake of magnitude 6 or greater on the Richter scale takes place in Japan, which in turn occupies roughly 0,25% of world's land area. Finnish culture is so implicit that many Finns do not know what in fact is Finnish culture, whereas Japanese culture is so explicit that many Japanese do not pay it much attention aside from abiding by it. Japan is a mountainous island nation, while Finland is a flat extension of the Asian continent that has a long marginal sea shoreline.



GDP per Capita of different nations around the globe (Maddison Project, 2018)

All of these differences fall into different categories. Some are environmental, like the climate or the geography, while some are biological, like the hair and eye colour, and some are cultural, like the common societal traits. It is these cultural differences that this thesis is concerned with, so the question really is, what is the relation between the cultural differences and the rest? Looking at Finland and Japan, 4 significant cultural polarities instantly come to mind;

Japan	**Finland**
Vertical society	Horizontal Society
Communality	Individuality
Specialization	Generalization
Social pressure	Direct control

The verticality of the Japanese society is infamous, and the horizontal nature of Finnish society is not without some renown itself. In Japan, almost anything is possible if the superior orders it, whereas in Finland the little man has as an equal say in most cases. Also well-known is the Finnish eccentric individualism, and the Japanese communality. In Finland it is acceptable to act in an individual fashion, and to be very honest and straightforward about one's feelings, whereas the Japanese are always extremely careful about the dynamics of the group, sometimes never revealing their true feelings. The specialist nature of the Japanese, and the generalist nature of the Finns are a little bit more clandestine, but discernible to anyone familiar with both societies. The quality of Japanese craftsmanship is legendary, but almost as renowned is the "purity of style" exercised in said crafts. To do things differently, especially as a novice, is kind of an offense already. Thus, Japanese are much quicker to resort to professionals than Finns, who are very ready to undertake even relatively big projects by themselves, such as home renovations for example, even if they have no expertise on the matter.

The last polarity regarding control was best expressed by the interviews. While there was hardly any difference between those who preferred freedom over restrictions and vice versa in the original interviews, the reasons differed significantly between Finland and Japan. Finns were much more inclined to see restrictions as legal components imposed by leadership, whereas Japanese were much more inclined to see them as social constraints imposed by the community. In other words, Japan seems to tend towards implicit control, whereas Finland seems to tend towards explicit control. While the communality-individuality aspect of the two societies is certainly a big factor here, it is important to understand that the two aspects are separate; one regards action, while other refers to control.

As this thesis is about urban cultures and urbanism specifically, a more thorough analysis of the Finnish and Japanese cultures is unwarranted. Instead, using the urban fabrics as representatives of the urban cultures, there is a very curious list that deserves our attention. In *"Learning from Las Vegas,"* Robert Venturi presented a comparison of "Urban sprawl" and "Megastructure" to highlight differences between "ugly commercial architecture," and the "modernist dream of unified architectural look:"

Quite frankly, it is simply amazing how well this long list describes the two cityscapes. One only needs to change the titles from "urban sprawl" to "Japan," and from "megastructure" to "Finland," and the lists would hold true with but one exception; private cars and public transportation. Japan is world-famous for having perhaps the most reliable and comprehensive public transportation network in the world. However, as was explained in the historical narrative, this was in fact also accomplished by economic incentives, which are the main reason for practically all of the "urban sprawl" aspects.

As has been mentioned several times, many writers have surmised that the urban fabric and the cityscape tends to mirror the society in an implicit manner. The real question then is, why, despite all the similarities in the development of cities, did Finland and Japan end up with so different urban images and cultures? In other words, how do the other differences play into this?

Table 2. Comparison of Urban Sprawl with Megastructure

Urban Sprawl	Megastructure
Ugly and ordinary	Heroic and original
Depends on explicit symbolism	Rejects explicit symbolism
Symbols in space	Forms in Space
Image	Form
Mixed media	Pure architecture
Big signs designed by commercial artists	Little signs (and only if absolutely necessary) designed by “graphic artists”
Auto environment	Post- and pre-auto environment
Cars	Public transportation
Takes the parking lot seriously and pastiches the pedestrian	“Straight” architecture with serious but egocentric aims for the pedestrian; it irresponsibly ignores or tries to “piazzafy” the parking lot
Disneyland	Piazzas
Promoted by sales staff	Promoted by experts
Feasible and being built	Technologically feasible perhaps, but socially and economically unfeasible
Popular Life-style	“Correct” life-style
Historical styles	Modern style
Uses typological models	Uses original creations
Process city	Instant city
Broadacre City	Ville Radieuse
Looks awful	Makes a nice model
Architects don’t like	Architects like
20th century communication technology	19th century industrial vision
Social realism	Science fiction
Expedience	Technological indulgence
Expedient	Visionary
Ambiguous urban image	Traditional urban image
Vital mess	“Total Design” (and design review boards)
Building for markets	Building for Man
This year’s problems	The old architectural revolution
Heterogenous images	The image of middle-class intelligentsia
The difficult image	The easy image
The difficult whole	The easy whole

Table 2 from (Izenour, Scott Brown, Venturi, 1977), p.118

First of all, while human genetics likely play a role in the formation of an individual's personality, genetic evolution has not had nearly enough time to make any decisive changes in national genetics. This is because evolution works blindly with random chance as its only tool. Contrary to a popular misconception, evolution can in fact work very quickly whenever a new, useful mutation is arrived at. This mutation can spread into the entire population in just a handful of generations. The problem is, mutations are almost infinitely more likely to cause disadvantages, if not downright death, as random tinkering is highly unlikely to make an improvement on a piece of extreme precision machinery that living organisms are. Evolution does not work intentionally, aiming at a certain kind of necessary change in countless iterations into the future. Even cultivation, the intentional breeding for specifics traits, usually expands on what is already in the species instead of employing genuine evolution. Think of dogs, and you will remember that all the different types of dogs, big and small alike, are still members of the same species, *Canis familiaris*.

Further, personality traits are much more complex than simple physical abilities. There are only a couple of dimension to strength, or vision, or height, or hearing, etc. While the same might be true for singular personality traits, these traits interact with each other on a whole different scale from physical traits and abilities. This would be like colour theory, only with tens if not hundreds of 'basic colours' instead of the basic three; red, blue and yellow. This would mean that even if there was a mutation that would result in a useful personality trait, that trait would be heavily masked and individualized by all the other traits there are in an individual. After all, as the officers of the British Empire used to say, "There really is nothing quite as individual as an officer's uniform."

And, above all else, cultural evolution plays the game at so much faster rate than biological evolution, that it is unlikely for biological evolution to have a significant influence in different cultures, aside from the very basic human nature. Furthermore, human societies are so varied and colourful that there always tends to be space for all manner of people to prosper. Just to give a simple example, while the myth of extraversion is strong, making us believe that it is much better to be outgoing and extravert, introverts can easily do equally well in the world (Cain, 2012). Not to mention that nations have always cross-bred. Finnish gene-pool has been heavily influenced at the very least by the Swedish and the Russians throughout the Finnish history. Likewise, before the *sakoku*-edict of the Tokugawa *shogunate*, Japan had several colonies in South-Eastern Asia, and there were plenty of Korean and Chinese workers coming and going.

Environmental factors on the other hand have played a big role in the formation of vernacular architecture. The humid summers of Japan and the cold winters of Finland have without a doubt had a serious influence over the traditional building methods. In fact, the objective of the houses is almost reverse, as the thick Finnish walls try to keep the cold of winter away, and the removable sliding walls of Japanese houses try to let the gentle wind in to ease the sweltering Japanese summer. This does not however, have anything to do with the urban fabric, which could take either of the forms proposed by Venturi (et al.) regardless of the architectural style of the individual buildings. The issue is that Finnish urban fabric is largely uniform, almost always adhering to a central theme, whereas the Japanese cityscape tends to be chaotic, and without a single unifying theme aside from the typology of the housing. Should the environment warrant a specific kind of urban structure, this would be a major influence, but alas, this does not seem to be the case. Thus, the environmental factors, like the heavy rains of Japan, or the snowy winters of Finland, only tend to play a technical aspect in design of the cities. The urban fabric seems to be completely unaffected by these technicalities.

Typical Finnish cityscape; Helsinki (photograph by Hanna-Maria Hagberg)

Typical Japanese cityscape; Yokosuka (横須賀) (photograph by the author)

Even further, the disparity between cityscapes is evident even in the legal systems: Earthquake proofing, a countermeasure against a severe environmental hazard, was only put in the legal building code of Japan in 1981. Before this there were naturally other countermeasures, like the limit on building height (100 feet; 30,5 meters) in the 1950 Building Standard Law, or the 1924 requirement to present structural calculations against seismic forces (Building code of Japan, 2012). However, the story of fireproofing in Japanese cities is repeated here, as enforcing these requirements, especially the structural calculations, proved difficult. On the other hand, Finland was able to pass legislation that controlled unsightly and unhygienic shantytown developments in 1932 within a couple of decades of their appearance. This legislation was of course copied almost directly from the Swedish law of 1907, but nevertheless, the contrast is stark. Japan took as late as 1981 to pass a specific building code on as severe and ancient a threat as earthquakes, whereas Finland was able to pass legislation to a purely urban problem within a couple of decades from its conception.

The geographical aspects tell a similar tale. Both Japan and Finland have had a good central location in terms of trade, but the isolation of the nations have downplayed this aspect in the past. Most of the big cities in both nations are naturally located next to sea, or next to major waterways. Even the mountainous geography of Japan has only restricted the available space, redirecting urban sprawl along constricted lines of the valleys between the mountains. In terms of streetscape, there is hardly any real difference between the big cities of the plains and the small mountain towns, aside from the lag in "fashion" between central and rural areas. The mountain towns can sometimes seem aesthetically like a decade or two in the past. On another hand, the vast wilderness right outside of the towns in Finland could easily promote American-style urban sprawl, and although the issue has been a hot topic lately (for example, Helsinki masterplan 2050, which aims at heavy intensification of urban fabric), this has been avoided quite efficiently so far.

However, there is still one more aspect that has always greatly divided the two nations, which could explain almost everything. Even further, this aspect is in fact a combination of biological, environmental and geographical factors. It is, of course, the size of the population, which is limited by all of the above. However, "size of population" does not really have a good ring to it, nor does it capture the full breadth of the idea, so I would like to use a different term, which is;

Population Magnitude

The word 'magnitude' is doubly good here, because it has two specific nuances that are both very useful: The first, the quite literal size of the population in powers of ten, and second, the intensity of said population. Based on the two stories of urbanization, on the similarities and differences between the two historical narratives, and the influence the other differences have had, I find these two aspects combined to have been the greatest influence on urban culture, and urbanization over the centuries.

The idea of population having a great effect on history is not a new one. In his 1980 book, *"Fate of Nations,"* ecologist Paul Colinvaux argues that human history is largely determined by one single aspect; the human reproductive behaviour. The argument is simple enough; the human species, *Homo sapiens,* is a product of biological evolution just like every other species as well, and thus it must adhere to the same inherited principles that drive other species forward, lest the ancestors of *Homo sapiens* would never have survived to produce us. One of these principles is to produce the maximum possible amount of offspring that can succeed in the next generation. Consequently, as the population grows, slowly but surely nations start to feel the constraints of their resources and must decide how to proceed forward. Thus, Colinvaux argues that human history is largely caused by the jostling of the masses. (Colinvaux, 1980)

Typical Finnish downtown cityscape; Rautatientori, Helsinki (photograph by Hanna-Maria Hagberg)

Typical Japanese downtown cityscape; Shinjuku (新宿), Tokyo (photograph by the author)

In other words, population magnitude has a very serious effect on the development of cultures. Not only because people limit the amount of resources available to others, but in terms of space and freedom as well. The more there are people, the more constrained the general lifestyle must be, as freedom requires more and more resources in a growing population (Colinvaux, 1980). After all, freedom means in effect the opportunity to pursue a more diverse future, and that requires advanced education, as well as resources to back such lifestyle up. So, let us look at the cultural polarities again;

Japan	**Finland**
Vertical society	Horizontal Society
Communality	Individuality
Specialization	Generalization
Social pressure	Direct control

The difference between the vertical Japanese and the horizontal Finnish society is easily explained, as more people put pressure on the power structures. When the people are sparse, everyone's input matters, no matter their capacity or capability. Even children are let in on the decision-making process the moment they show capacity of understanding the issues. Then, as the amount of people increases, specialization must also increase, which in turn must bring out hierarchies between different positions, or classes in more developed societies, or in extreme cases, castes. This development has been seen time and again in both ancient and more modern cultures, and it always tends to progress together with the increase in population size (Colinvaux, 1980).

The same line of thought also tends to explain the trend towards specialization. The less people there are, the more there is need for everyone to share skills and abilities so that they may help each other in times of need. A society simply cannot afford to suddenly lose a specific skill, unless it has become useless. On the other hand, to stand out among everybody else, and to make ends meet, highly developed specific skills are necessary in a bigger population. Otherwise everyone will drown each other in a cacophony of the same skillset sold at every corner. It is simply more efficient to provide customers with something that no one else can. This trend towards specialization is also one of the great charms of increased magnitudes, as it creates the special and unique environments that could not evolve otherwise.

For a concrete image of this idea, imagine a table and throw a fistful of small rocks or pebbles on to it. While some grouping is bound to happen, it is highly unlikely that a lot of the rocks are going to end up on top of other rocks. However, if you were to pour a bucketful of the same rocks onto the table, you are certain to end up with a pile, if not several, on the table. This is how the dynamics of the magnitude work like. In the fistful example, each and every rock is visible, and contributes to the entire shape. Removing even one stone can visibly change the image, possibly even dramatically. However, in the bucketful example, even taking a handful of rocks away from the cacophony is unlikely to change the general image much. And to continue with our metaphor, what about the rocks that fall off the table, for which there was not enough space?

We can turn to anthropology for powerful examples. The Eskimo saying from third chapter, *"like whips make dogs, gifts make slaves,"* already showcases the sense of equality that less populated cultures place upon one another; *"What I get today, you may get tomorrow."* Helping the tribe, or the society to survive is a matter of course, and thus certain acts do not require reciprocity. And while it is sometimes acceptable, even expected, to scam and cheat people outside your own tribe, it is utterly unacceptable to betray said family/tribe (Sahlins, 1972). Otherwise, the entire network of trust, the very glue that keeps the society together, is going to crumble.

Magnitude visualized; drawn by the author

In fact, “gifts” have often been the way chieftains have been made, as it is the gifts they distribute to everyone that renders everyone in their favour (Sahlins, 1972). And it is ultimately professions that bring the idea of “gifts” forward. Whether food can or cannot be used as a gift depends from one culture to another, but even in cultures where food is within this realm of exchange, fine objects and services tend to occupy higher echelons of such interactions (Graeber, 2012). Such interactions are sometimes referred to as “gift economies,” and they work fundamentally different from barter in that no repayment is expected on the spot. Instead, reciprocity is expected sometime in the future when (if) a proper occasion rises, and often in a form that is different from what was received. That way the bonds that tie both parties together are never entirely severed. We could say that similarity between individuals is the key to equality.

Even though it would first seem that the communality-individuality aspect is topsy-turvy by the above logic, it is not. Quite contrary in fact, as the Finnish individuality springs from precisely the almost tribal equality that allows for eccentric personalities. In fact, if it is not your skills that set you aside from

others, what other is there except your personality? Further, the independence derived from sharing skills with others certainly provides ample room for individualism. On the other hand, higher magnitudes tend to drown individualism. In Japan it is often considered a virtue to be as good as you can be at what you do, but at the same time to stay relatively silent about it because there are others in the same field. In other words, you are supposed to promote the craft (or the company) instead of yourself. This usually emphasizes communality, as especially in higher population magnitude cultures crafts are rarely practised by a single craftsman. Recall the image of the woodblock printing studio in the beginning of the historical narrative, and you will see that creating *ukiyo-e* art employed numerous people, some of whom were not even artist themselves.

Ukiyo-e; "Making Prints" by Hosoki Toshikazu (細木年一), 1879 (Wikimedia Commons)

And this leads us to the final aspect, which is social control over direct control. This is easily understood in the historical context, as enforcing complicated legal code on a large population is simply impossible without modern technology, whereas it is still doable within a small population. Instead, the Japanese Edo-period method for control was through grouping people together, and then punishing the entire group for an offence by any single member of the group. This created a natural system of social pressure, where everyone was watching everybody else. Today, even though the group punishments have certainly faded away, the idea is still very much alive. For example, a typical Japanese work environment is an open office, and work is then conducted in "units." It it's the performance of the entire "unit" over the performance of an individual that matters. While normal society is not built like this, the same communal idea remains strong even in everyday affairs. The group is much more important than the individual.

Finland on the other hand has had sparse population for a long time, and thus work was also often conducted in private. Not because people wanted privacy, but simply because there were not enough people to supervise the work. Thus, as there was neither social pressure nor immediate surveillance, hard rules and regulations were the natural means of control. As long as the rules make sense, everyone is simply expected to follow them, and that is all there is to it. This naturally leads to a culture that places emphasis on personal responsibility, and in which collective work is conducted in good spirit and encouraging manner. Consequently, this also leads some Finns to find immediate surveillance and obvious social pressure irritating, if not downright bothersome.

All of this becomes even more apparent as one moves away from the big cities and into the rural villages, where life and community are quite different. Although the evidence is largely circumstantial, many of the Japanese interviewees commented on this difference, stating these villages were more open, warm, friendly, helpful and inclusive than big cities. Much more like Finland that is. Furthermore, many Finnish interviewees also commented on the difference between urban and rural communities, further supporting the idea of population magnitude having a big effect on the structure of the

community. Take for example the words of Tanaka Kakuei (田中角栄) (1918-1993) when he became the 40th Prime Minister of Japan (1972-1974), written on his ambitious new plan to reshape Japan;

> *"The rapid growth that began in the last half of the 1950s brought about an excessive concentration of population and industry along the Pacific coast, transforming Japan into a unique society of high population density. While the big cities suffer from the pains and irritations of overcrowding, rural areas suffer from exodus of youth and the resultant loss of vital energy for growth. Rapid urbanization has bread increasing numbers of people who have never known the joys of rural life, chasing rabbits in mountains, fishing for crucians in streams, whose only home is a tiny apartment in some huge city. With such a situation, how can we pass on to future generations the qualities and traditions of the Japanese people?"*
>
> Tanaka Kakuei, *Building New Japan,* 1972 (from Sorensen, 2002)

In the second chapter I presented necessity and duress as the true driving forces behind cultural evolution. That nations and cultures only change when they have to, when it is imperative for them to do so. But the necessity nor duress need not be big ones to have an effect. Indeed, it is easy to see the necessity and duress during times of crisis, but in the long run the feedback-loops that cultures are are affected just as much by the countless ambiguous, slow and little events that occur all the time, as they are by the big ones. Slowly coming to the realization that your "business model" or "profession" is not profitable over long time facilitates change just as much as sudden lack of work (or food for the matter). Possibly even more so, because big sudden changes in circumstances can easily simply change the entire idea of your position in the world instead of changing the idea of that position. For example, when a member of the upper echelons suddenly loses their position, they are very likely to adopt the ways of the commoners, and thus become commoners in the process, effectively having no effect on the commoners' idea of the lifestyle of the upper echelons.

Thus, population magnitude very naturally plays a commanding part in cultural evolution, both in small and big scale. When the magnitude increases, pressure is put on the system, constricting the overall freedom of individuals. Likewise, when the magnitude decreases, pressure is taken off the system, and the overall freedom of the individuals left in the system increases. Even when the magnitude remains roughly the same over a long period of time, it is still an important factor as it locks down the system. Edo-period Japan is the perfect example; by the beginning of the 18th century Japan had reached the new population cap, roughly 35 million people, and after that neither the national, nor the local populations changed much. As a result, the Japanese technological, philosophical and economic development virtually ground to a halt.

Shibuya (渋谷) crossroads, one of the most renowned spots in Tokyo; photographs by the author

Typical Finnish streetscape; Kallio, Helsinki (photograph by Hanna-Maria Hagberg)

Typical Japanese streetscape; Ueno (上野), Tokyo (photograph by the author)

However, the one thing that culture and cultural evolution do not do is stop. Even during the entire Edo-period, Japanese culture kept evolving. Sure enough, the cultural evolution was slowed down, as changes in circumstances became rarer, and familiar ways are almost always preferred to novel ones. In fact, old ways are usually preferred even when the new ways are seemingly better. This is one of the most common examples of the inertia of change. It can easily take decades for a better method to overtake the old. It is no coincidence that a couple of decades also just so happens to be the time it takes for a new generation to grow into adulthood. Humans have tendency to be rebellious towards the old ways in their youth, and then be protective of their experience towards older age. In fact, this is inbuilt in us (Colinvaux, 1980). After all, if all our ancestors did was to change their ways all the time, or adamantly stuck to the tried-and-true, they would not have gotten very far. Change is a universal constant in nature, and it makes sense to have an inbuilt system that questions the learned traditions. But question it too much, and it is easy to stray too far from the safety of the tested-and-true.

Urban Culture and -Fabric

As has been mentioned before, many writers and scholars consider urban fabric a good representative of the society and urban culture. Thus, coming back a full circle, if we assume that population magnitude is a commanding factor in cultural evolution, then the reasoning above would imply that it is also a commanding factor, although not necessarily the only one, in formation of urban fabric, especially in the long run.

To simplify the issue, let us look at four different aspects that largely dictate how the urban fabric forms. While it is unlikely that these four aspects cover everything, it does seem fair to claim that they constitute the majority of it: First, *available space*, meaning the physical space in which the urban fabric evolves; Second, *regulation*, meaning the rules and regulations that limit individuals as creators of urban fabric; Third, *planning*, meaning larger and more holistically controlled activity conducted by a larger organization, usually the city itself; Fourth and finally, *community*, referring to the local residents and their grassroots organizations that create the all-important human element.

Intuitively, the first aspect seems like an obvious one, as surely the population magnitude must limit the available space; more people means less space for everyone on average. However, the same logic would mean that geographical limitations should also have a significant effect on the urban structure since the effect is technically the same; in both cases there is less room for everyone on average. Nevertheless, as it was mentioned above, geographical limitations simply seem to have less of an impact on the urban structure and streetscape. The fact that geographical limitations usually do not change over time is also a factor, but it is the quality of those limitations that is the key element here: Instead of intensifying the existing structure simultaneously as the population grows, typically the urban fabric is first allowed to spread to either farther away, or to less favourable secondary spaces in the same style. It is only after this contrived spreading of urban fabric that the previous areas start to intensify.

This discrepancy seems to be caused by the ever-present inertia of change. After all, intensification and retrofitting are much more wearing processes than expansion, as it is far less likely to incite local resistance. In Japan, the similarity between the general streetscapes of mountain towns and the cities of lowlands are a strong testament to this. Intensified urban structure is only found scattered about the grand urban fabric, usually around the heaviest transportation nexuses, while the rest of the urban fabric stays roughly the same as before. Likewise, the recent urban developments in Helsinki capital region in Finland tell a similar tale; only after the sparse urban fabric had spread to virtually everywhere did plans of intensification begin to appear. In other words, geographical limitations have

the same effect as an increase in population magnitude, but only after the *hard* limitations are reached. For example, instead of significantly altering the urban structure the urban fabric has instead spread on the sea itself in both Helsinki and Tokyo. Thus, only a sufficient increase in population magnitude, or an extreme geographical limitation are likely to change the urban structure.

Take Reiji Obase's argument that the one thing that truly separates Finnish and Japanese planning is the ownership of the land. His argument is indeed true, but it is uncertain if it could have been possible for Japan to adopt the same idea of buying the land when it is cheap, and then sell it when it was developed, as the energized population magnitude elevated the land prices to a whole new level. In fact, while the local governments were strapped for cash and power, it was the private railway companies that utilized this type of development strategy in Japan when it was still possible, first buying the agrarian land cheap, and then developing it so that it could be sold or rented at premium prices when the rails were laid. However, after the initial urbanization of an area, even a light one, the price of land skyrockets, quickly making the initial investment ever harsher.

The second aspect is already significantly more nuanced, as depending on the definition of regulations it is equally easy to argue that an increase in population magnitude leads to more regulations, as it is to argue the exact opposite. The key is, again, the nature of these regulations, as an increase in population magnitude tends to increase the purely technical requirements, whereas low population magnitudes tend to be much more conscious of aesthetic values, which are more social in nature. The easy explanation is that it gets exponentially harder to find a common tune as the group grows. As was seen in the interviews, a clearly Japanese concern in urban planning was the worry that it will be nigh impossible to please everyone in larger groups. While this could well be a simple repercussion of the planning systems, it is striking that such worry came from the nation with higher population magnitude, and stronger tradition of social control.

More nuanced explanation involves necessity and duress, the facilitators of change. As the city grows more and more intense, the pressure on the limited amount of available space tends to start fragmentation in the urban fabric. *"Made in Tokyo,"* a book by Kajima Momoyo, Kuroda Junzo and Tsukamoto Yoshiharu, is a powerful testament to the vibrant and extremely vigorous power of high population magnitude urban cultures. Befitting the theme of evolution of urban culture, the book showcases how every nook and cranny available in the intense urban fabric is utilized in a wide variety; temples on top of apartment complexes, residences underneath highways, multi-storey buildings only a couple of meters wide, etc.; if the regulations do not explicitly prohibit it, it can, and probably does, exist in Tokyo (Kajima et al., 2001). Space really is the key facilitator here, because the unavailability of it induces necessity and duress, which in turn helps in overturning the inertia of change.

And this really is the key. As the population magnitude places ever greater pressure on the limited space, regulations must adapt to this pressure. Regulations too lax are a serious hazard in a multitude of ways; fires, earthquakes, storms, hygiene, logistics, structural integrity, just to name a few. However, overtly harsh regulations only serve to slowly strangle the developing urban culture, creating dead urban spaces. Thus, to create lively and vibrant urban spaces, regulations must also adapt instead of just tightening as the population magnitude grows. Further still, if the written regulations are at serious odds with what could be considered essential or vital activities by the local community, it is likely that these regulations will not be adhered to simply because they exist.

The way these aspects manifest in the real world is usually through economics. Cities are based on economic activity, which in turn is completely artificial, human-based system that is extremely dependent on the population magnitude. Harsh regulations can easily inhibit this vital economic activity, not to mention that harsher regulations also raise the price of construction. These are very

strong incentives for looser restrictions, even when there might be desperate need for stronger restrictions instead. Again, the historical narratives prove this point time and again. The sheer economics of scale were not ignored in the interviews either, which several interviewees acutely pointed out. These views are represented perhaps the best by one of the Japanese interviewees;

> *"[…] …hmmm, well that's it, I think. It seems there aren't really a lot of these "House Makers" outside Japan… And there, it's like a puzzle, just "bam-bam-bam," and a house has been built. Well, architecture is more, it should take into account the place and the people.*
>
> *For example, in Nara, it's very proper…ish, but when you have scenes where the same house is lined up and scattered all over, it's not really very good, is it… I think that the problem is that design, or architecture, is not really taught… to people who order the houses. That they don't know to ask for better, that they are unable to desire better houses. That's one reason why it's like this… […]"*

"[…] …うむ、そうだね。ハウスメーカー…って言うの、あまり海外に無いみたいなぁ…　で、それも何か、パズルみたいに、「パンパンパン」って住宅を建てて行っちゃって…　ま、建築ともっと、その場所とかその人に特化した様な。奈良では、例えば、真っ当しいんだけど、同じ家が並んでる様な風景が作られ散ってるのは、あまり良くないことかなぁって言うのは…　あまりそう言う、デザインとか建築の教育をされてないのはちょっと問題かなぁと思ってて…　家を頼む側の人が、何かもっと良い家を作りたいとか言う…欲求とかかないからこう言う成り立って言うのは… *[…]"*

Here it would be easy to crudely generalize that higher population magnitudes tend toward technical regulations and fragmented cityscapes, whereas lower population magnitudes tend towards aesthetic and structural unity. This would however be wrong, as the overall unity of the cityscape is largely dictated by the large-scale urban planning, both in local and citywide scales, bringing us to the third aspect. The question is, how does the institution of urban planning change as the population magnitude changes?

"If regulations do not explicitly prohibit it…;" Cityscape of Nagoya (名古屋) (photograph by the author)

In this regard, the recent high-rise developments in the Helsinki capital region are very curious indeed. These developments are partly caused by the “lack of space” mentioned above. To anyone familiar with the Japanese urban structure, to claim that there is lack of Space *anywhere* in Finland must seem ridiculous. However, when looked in the Finnish context, the traditional sparse use of space is starting to become very hard to defend. In the terms of this discussion, all of the available space has now been used in the “old” manner, finally warranting intensification of the urban fabric instead of simply spreading it further. The curious point however is that while these developments certainly adhere to all the strict technical standards, and even to the very strict aesthetic regulations, yet they are still a breech to the traditional, age-old image of Finnish cities, and level skylines:

The tower of Niittykumpu; completely new form of streetscape in Finland; (www.espoo.fi)

Close inspection of the processes of urban planning tend to always reveal hidden hierarchies and power structures, as has been mentioned above numerous times by a variety of authors (Flybjerg, 1998) (Ushio, 2005) (Taipale, 2009) (Sorensen, 2002). This is not surprising, as urban planning has a very peculiar power of generating technically artificial value out of nothing with a simple stroke of a pen; simply changing the restrictions on a plot of land can easily multiply the value of it, creating a huge danger of corruption. Instances of corruption are in turn observable as conspicuous discrepancies in the urban fabric. The curious point however is that even when there really is zero corruption, the plans still tend to produce striking discrepancies in the urban fabric. This is mainly because spreading the growing population magnitude evenly becomes increasingly harder as spreading the urban fabric changes into intensification of it. Projects tend to take longer and longer to realize, and the dramatic increase in economic activity does not spread equally either. By nature, most of the pressure looks for the easiest output, and then channels out from there.

Thus, it seems fairer to say that instead of the technical/aesthetic-division, population magnitude tends to showcase the hierarchical power structures that come out very naturally in the urban fabric. In lower population magnitude areas, these are very level and horizontal, and thus also tend to be more structurally uniform. On the other hand, in higher population magnitude areas, the power structures tend to gradually become more and more vertical, which is then reflected in the urban fabric as increasing variation. Take this excerpt from a Finnish interviewee, who had plenty of experience of working in the planning department of a smaller town. The view taken is extremely horizontal and Finnish, befitting the lower population magnitude, but it is also an excellent example of how the power structures will gradually start to emerge;

Typical Finnish cityscape; Tampere (photograph by Hanna-Maria Hagberg)

Typical Japanese rural townscape; Itō (伊東) (photograph by Hanna-Maria Hagberg)

"[…] (Interviewer; …but, apparently this does not show too strongly at work? Politics, I mean.)

Well, hmm… In a way, in my work, it has been kind of a shock that, for example… There have been cases where somebody, a client, that when (s)he has not been given what (s)he wants, like for example permit for more building volume than it says on the plan… That when such requests are not usually accepted, by default, (s)he like instantly e-mails all the policymakers of the city. And usually in a furious manner. In a way, (s)he's making a complaint…

In that way I'd say it is, like if (s)he calls all these politicians in the city council, and regional council, or e-mails them something, or tries to appeal to them, then, I'd say that has something to do with politics. After all, those politicians decide about our departments resources, and so on, and then, like, it feels even a bit, well, childish… And like that… Well, that should someone be given something just because (s)he has influential friends? Certainly not. Like, yeah. […]"

"[…](Haastattelija; ...Mut ilmeisesti töissä se ei tuu kauheen… voimakkaasti esille, se politiikka?) *no tota, hmmm… Sillai se kyl, niinkun, täs omas työssä, on mulle itselleni ollu tietyl taval vähän sellai järkytyskin että, et, et, esimerkiks... on ollu tapauksia, että joku... asiakas, ni hänelle ei ole, tyyliin, annettu sitä mitä hän haluaa, esimerkiks vähän rakentaa kaavan vastasesti tai jotain, ja sit, siihen ei oo niinkun, vaikka rakentaa enemmän mitä kaava sallii... Sit kun ei lähtökohtaisesti, siihen ei suostutua, niinkun, niin sitten hän pistää, saman tien, tota, kaupungin päättäjille hirveet sähköposti-viestinnät, ja tälläiset, niinku... tavallaan tekee valituksen... Ni et sillein tavallaan mä niinku jotenkin näkisin, et jos se näille poliitikoille, ketkä on siel kunnanvaltuustossa, ja kaupunginvaltuustossa, ni heille saman tien pistää sitten jotain sähköpostia, vetoaa tavallaan niihin, niin, se on mun mielest tietyl taval jotenki kyl liittyy siihen politiikkaan, koska sit ne taas päättää meidän osaston resursseista ja kaikista tälläsistä, ja sit niinku, ni se on aika, jotenki tuntuu, vähän niinku, ehkä lapselliseltakin... Ja sillein että... Tai että se et pitäiskö jolleki antaa jotain vaan sen takia, että hänellä on vaikutusvaltaisia kavereita? Ei todellakaan. Niinku. Joo. […]"*

The final aspect is the local community itself. Naturally, this aspect is the most dependent on the population magnitude, but in a somewhat quirky way, as the change is additive. The idea works like this; one person acts in a different manner than a group of ten, who act in a different manner than a crowd of hundred, who act in a different manner than a horde of thousand, who are then different from ten thousand, hundred thousand, million, and ever so on. The size of the group has a major influence on how it acts, on how it is governed, and ultimately on how its culture shapes.

The additive nature of the change is caused by the fact that any group can be sub-divided into sub-groups, each with their own "sub-culture," which is effectively the feedback-lop of the individuals of that particular sub-group. In other words, even as the overall magnitude increases, the dynamics of the lower magnitudes are also included in the whole. For example, it is absurd to think that Finns would think themselves Finnish, and only Finnish, and Japanese themselves as Japanese and nothing else. Within countries there are provinces, prefectures and regions, and within these there are municipalities, towns, boroughs and cities, and again within these there are districts, streets, communities, etc., and sub-groups within these, and within them…

In fact, if overlap is allowed, the combinatorics can provide far more sub-groups of several people than there are individuals in the initial group. Naturally, not even a miniscule fraction of these possible sub-groups are realized, and yet it is still very likely that there are more sub-groups than there are individuals. These systems, or sub-cultures, are in constant interaction with the neighbouring systems as well as with themselves. While the strongest influence on a culture is the internal exchange of that culture itself, the influence from outside cannot be omitted, for it may be the most important. Finally, there is no reason why the neighbouring group could not be of a different magnitude. Densely populated cities are often surrounded by sparsely populated countryside, and almost uninhabited commercial districts may be right next to dense residential areas.

Intersecting cultures; through common factors in-between, ideas swap across cultures; drawn by the author

Thus, the community is very much affected by not only its own population magnitude, but by also those surrounding it. Moreover, the general nature of the community changes as the population magnitude changes. Smaller communities can manage with horizontal power structures, as everyone roughly knows everyone else, whereas larger communities naturally start to build some form of hierarchies.

Extelligence gone rogue?

Thus, we can see how population magnitude affects cultural evolution, and through it the formation of urban fabric. Indeed, not only does population magnitude seem to come up everywhere, it also seems to be playing a key role time and time again. However, there is one aspect in which population magnitude is practically irrelevant: Technological development is virtually independent of local population magnitudes, and it has the power to change the limited resources available to the cultures. By building higher, or digging deeper, or filling up the sea, more space can be created. Faster means of transportation change the relative (temporal) geographies of the cities, and future building technologies can vastly alter the urban fabric basically overnight.

But, technological development has existed throughout human history. Granted, the speed at which it takes place has accelerated dramatically, but nevertheless, conception of new technologies that can reshape the available resources, and thus reorganize the urban fabric are nothing new. In fact, innovation is simply one of the channels through which cultures evolve. After all, necessity is the mother of all invention, as the famous saying goes. But necessity does not depend on population magnitude. Necessity may arise because of it, but all it really takes to come up with an innovation is one person with a problem to solve.

However, the greatest achievement technological development has achieved so far took place not four decades ago in the sphere of *extelligence*. This would be the *Internet*, which changed the entire playground. As cultural evolution takes place on the mental level, in a world where it is more likely for

a person to have a smartphone than access to clean drinking water, internet serves to link virtually every living person on the planet with a flick of a finger.

Not to sound overtly dramatic, but especially in the light of this thesis, we truly are at a beginning of a new era. In just four short decades, internet has changed everything, from the way we experience spaces to how cultures develop. With the advent of numerous new technologies, including augmented reality, internet of things, crypto-currencies, and social media to name but a few, it is not inappropriate to think of internet as a new, the so-called "3.5th" dimension.

The greatly accelerated speed at which technological development happens is one thing, but the fact that the internet is barely one human generation old provides a truly mystifying situation, to which there simply is no precedent. The terrifying speed at which internet is currently evolving does not help either. The closet similar development was probably the written word, and then the spreading of literacy, but even this does not begin to capture the gargantuan effect that internet is having over cultural evolution. Instead of simply providing extelligence with a more fertile breeding ground, internet has completely changed the way cultures can evolve. In fact, if culture is understood as it is in the context of this thesis, internet enables creation of completely virtual cultures, ones that have zero relation to geographical location.

Put differently, internet has the power to flip the whole concept of population magnitude on its head. Before, the more eccentric the sub-culture, the larger the local population magnitude needed to be to accommodate enough individuals who would want to partake in such eccentric culture. In effect, extelligence was severely limited by the physical space. Now however, sub-cultures can form all across the globe, thus creating a whole new dimension to the concept of extelligence, and through it to population magnitude. This dimension is only half a dimension though, since people still need to exist in the real world for the time being. This in turn ties them to the local cultures via upbringing, language, education and everyday encounters.

Nevertheless, the novel effect is very real, and unlike the historical narrative offered here, there is very little data available for analysis, mostly because we have not yet really seen how one generation passes its memes to the next one, nor what they are; we are in the middle of that process for the first time right now. Moreover, the internet keeps evolving very rapidly, thus changing the rules of the game constantly. For example, social media is not old enough to span even one human generation. Frankly put, at the breakneck speed things are evolving, I do not think there is anyone in the whole world who even remotely understands how the internet really works, or what it even really is. Truly, internet is a form of extelligence gone rouge.

Map of the Internet in 2014 by JaySimons ©, used with the creator's permission; (jaysimons.deviantart.com/)

In the End?

It seems that the circle is complete. At least in terms of Finland and Japan, urban fabric seems to be a fair representative of the local culture, which in turn is greatly influenced by their population magnitudes. However, this representation is more implicit than explicit, and since no hard rules are easily derived, some form of interpretation is always needed. It is here where the comparison between Finland and Japan fulfils its role, as it showcases several similar developments with different results, as well as several different developments with similar results.

The question left unanswered by this thesis is how influential the population magnitude really is in the *short term*? The historical narrative provides us with plenty of instances for study of the long-term effects, but it would seem weird for the population magnitude to not have significant short-term effects as well. After all, it is no wonder that organizations are organized in hierarchical manner, military being an extreme example. Effective leadership depends on understanding the dynamics of the group and organizing the structure of the group according to those dynamics. Here the population magnitude is vital, as the amount of people exponentially increases as the magnitude increases. It is easy to see how management that was suited to the previous magnitude might be ill-suited to a new, different magnitude.

This thesis provides no answer to this question, and no part of it should be understood in the short term. By design, this study was conducted over hundreds of years on cultural evolution, which often happens *between* generations, implying a time increment of roughly two to three decades. This is a long timescale even when considering long-term city development strategies. Thus, this aspect of the population magnitude warrants more research.

Another point to which this thesis has little to say is the internet, and the effect it is going to have over the evolution of cultures. The internet has in theory increased the number of dimensions available to us by one half. Even though we still exist somewhere, our presence can now be felt all over the world with a flick of a finger. This is something no other technological development has achieved before, and while we can easily say that its effects will take place within the concept of cultural evolution and population magnitude, the exact effects, or the direction the internet is going to evolve in next are wayward at best. However, the key change that internet made was the additional dimension. When that core idea has transferred from a generation that was completely raised with it to the next, a number of deductions can be made, and that time is very close at hand now.

Again, this thesis provides no answer to this question either, although parts of it can be used in understanding the formation of cultures. The rules of the game do not change depending on the platform after all; culture is still the feedback-loop between the individuals and their shared extelligence, and cultural evolution is the evolution of this system in one direction or the other. The big issue is that the scale has exploded dramatically. Today, speaking about world-culture is no longer a fantasy. Today, we can have a look at a culture, which has the population magnitude of a staggering 7,6 billion, meaning a mathematical magnitude of 9 (10^9). Whether we will go on to break the 10 billion limit remains to be seen. Either way, this aspect also warrants much more research.

Further, the aim of this thesis has not been to mock nor praise either low- or high population magnitude cultures. If anything, cities are the most important facilitators of cultural and technological evolution as points of maximum concentration of humans. Cities are wonderful places that can cater to any number of tastes and provide us with unforeseen innovations, inspiring environments as well as completely new and rich cultures. We would do well to embrace them as such. To be able to do

this, cities must be first understood correctly, and then nurtured carefully, and it is precisely for coming closer to this understanding, even if it amounts to just an iota, that this thesis was written.

Thus, the core message of this thesis, the one thing that should not be forgotten, is that it all really is about the larger human interaction. Whether the "Great Man -theory" is right or not is open to debate, but in the shadows, behind the public scenes, it is the gentle jostling of people that move the world forward. Innovations are created and decision made by great people, and they deserve all the glory (and in some cases, blame) for their achievements, but it should always be remembered that it is the masses, and their silent, seemingly insignificant interactions that facilitate all change. The rest is simply the output of an extremely complex and dynamic feedback loop that we know as "culture." In other words, while there is no one-size-fits-all solution for any urban fabric or -culture, the raw population magnitude of said place must be acknowledged as a core constituent of the cultural foundation.

I leave the final word to one of the Japanese interviewees, whose response is at the same time very natural and humane, and yet it is able to compile all the feelings of the interviewees into one fluent response that sums this discourse up quite nicely;

> *"[…] …I mean, well, people are good, people, in the end… hmmm… For example, in Tokyo, in city like Tokyo, there is architecture and such, and there is grass and such, and, well, characteristics like that. For example, in Nagoya there are a lot of subways, right? There's even support for underground development and such, but… Well, when you go to different places, they say that this is special, but you see, I don't really think so.*
>
> *I think that everyone, all cities and all towns and all areas, are quite the same, be it city or countryside. I think that there's nothing that exists* just and only *in one place… Like, that because this place is here. However, if there's something that truly is unique to each place, it's the people who live there.*
>
> *I mean, no matter in what way, what kind of town, how good a town or how bad a town one lives in, in the end… for example, if you lived on a mountain, or next to a river, in the end all the special characteristics would come from the people that live there with you. […]"*
>
> *That's exactly why it's the people, who most, well, how can I say this? Not really humanity… I mean communication between people, personalities and characters. That's how you can judge are-, more than areas I mean regions, how you can begin to judge regions… Take for example, Philippines, or [name of a Japanese village]; the communication between people there was so great; they were always talking with a smile on their face, and, well, for example, saying "thank you for coming." Or that they put out food, and such…*
>
> *Ultimately, it's that "character" from which the goodness of places, areas, regions, towns, cities, and whatnot, comes. That's how I feel. […]*

"[…] …何でかって言うと、あの、人が良い、人、あの結局、あの、まっ、ここだけ、例えば、東京だったらば、東京はこう言う街で、建物が有ってるとか、草が有ってるとか、ってよく言っ、ま、それが特徴だよねぇみたいな話し。例えば名古屋だったら地下鉄沢山通ってよね、何か地下が発展支援とか、言うと思うんだけど、それは、あの、どの世界に行っても、そこだけかって言うと、別にそうじゃないと思うね。皆同じような都市だったり、街、あるが地域であったり、田舎、が、ほとんど、あの、絶対ここじゃなきゃないってのはないと思う。ここならでもみたいな所が、けど、そこならって言うかであるのであれば、それはそこに住んでいる人。あの、どんな意味、どんな街、どんな良い街、どんな悪い街に住んでる様とも、結局、例えば山に住んで様か、川に住んで様が、結局そこに居る人がその土地の特徴に成って来る。からこそ、人、一番何って言うのかなぁ、人隣って言うか、人とのコミュニケーションだったり、その人柄。で、それは地、地域って言うか、その土地を判断する、から、え、フィリピンだったり、[ある日本の村]、は凄い人がコミュニケーションがぁ良くて、いつも笑顔で対応してくれたりとか、例えば、ぁ、来てくれたのね有難うって言ってたよね、してい何か、ご飯出してくれたりだとか、そう言った、人柄、が良い所は結局良い地域、土地、いい街、に成って来ると俺思う。*[…]"*

Ordinary Finnish cityscape; Matinkylä, Espoo (photograph by Hanna-Maria Hagberg)

Typical atypical Japanese cityscape; Azabu (麻布), Tokyo (photograph by the author)

人は天地の塵ぞ。

塵なればこそのいのちを思いきわめ、塵なればこその重さを知れ。

塵となりつくして天地に呼吸せよ。

“People are refuse of Heaven and Earth.

And it is because they are but refuse that they ponder life so, and it is because they are but refuse that they come to understand the weight of it.

And in becoming refuse they breath Heaven and Earth.”

- Kamiizumi Ise no Kami (上泉伊勢守), 16th century

Conclusion

"An nescis, mi fili, quantilla prudentia mundus regatur?"

"Do you not know, my son, with how little wisdom the world is governed?"

Axel Oxenstierna, 17th century

When looked over a long period of time, Japan and Finland are very different, but at the same time uncannily similar. Looking at them reveals that both have struggled with very similar urban problems, even though the population magnitudes are vastly different in many aspects. Not only is Finland far less populated, the Finnish geography allows for sparse habitation throughout Finland, whereas the mountainous landscape of Japan confined people so effectively, that during the Edo-period the national population peaked and remained stable for well over a century.

Effectively hidden from the rest of the world for centuries, the long period of stable low and high population magnitudes created the urban traditions of the two nations. When the situations began to change dramatically towards the end of the 19th century, it was time for the urban cultures to start adapting. Consequently, Japan, with long history of high population magnitude in the governing areas went one way, while Finland, with long history of low population magnitude went another. In Japan, due to the high population magnitudes, vertical society has been very strong, and thus the society evolved accordingly; The few chose the way, and the many followed while utilizing the system as best they could while they went. On the other hand, due to low population magnitudes in Finland, the horizontal society has been strong, and thus the society remained very conscious of all of its members, noble and peasant alike.

The urban fabrics and cultures mimic this. High population magnitude tends towards more chaotic, varied and fragmented urban fabric, whereas low magnitude tends towards uniform structures. Hindsight is always easy, and all choices the nations have made throughout the years were doubtlessly made after long and hard deliberation. Nevertheless, the way both nations constantly, time after time again, make the same kind of choices in dealing with crises is telling of the fact how significant the hidden, quiet force of the culture truly is. And it is the population magnitude that is one of the key components in understanding how cultures will evolve in the future.

It should be noted that nothing in this discourse tries to take any glory away from the incredible individuals who have steered the two nations through thick and thin. On the contrary, only individuals of extraordinary ability could have come up with the ideas and methods which helped the nations to move forward. The only thing that this argument does suggest is that there was a right time and place for these individuals to shine. They were able to make their mark on the world, *because that mark was needed*. Further, these individuals grew among the rest of the population, absorbing the prevalent ideas from the extelligence, witnessing the slow jostling of culture, and used this information to make their way forward. Thus, it could be said that through sheer ability it were the remarkable individuals who realized what was already cooking somewhere deep in the culture.

The American occupational force in Japan is a perfect example: When someone who is not connected to the culture tries to forcefully change it, the culture simply adapts to the new restraints, and quickly finds new outlets that might not have existed where the original idea was made. Thus, the words of Axel Oxenstierna, the esteemed statesman of the Swedish Empire. He spoke those words as an encouragement to his son, who was doubting his ability to hold his own against the diplomats and politicians of other nations. It is not about making the objectively right choice, but instead about making the subjectively most befitting one.

Acknowledgements

I am eternally grateful to a great number of people who have helped me enormously during my work on this thesis. The road was long, far longer than I could have imagined it would be when I stubbornly set the gargantuan task before myself. During the work I lost my way countless of times, and sometimes felt that it would be impossible to finish this thesis. Nevertheless, it is thanks to these people who kept pushing me forward when I thought I had reached my limits that I was finally able to finish this work.

First and foremost, I extend my gratitude to my supervisor and my advisor, Kimmo Lapintie and Hossam Hewidy. Most of the time they were extremely helpful but very professional when times called for it. Without their expert guidance none of my work would have been possible, and I thank both of them from the bottom of my heart for letting me go forward with such reckless thesis.

Next, I simply must extend my gratitude to Keisuke Kitagawa, and everyone in his laboratory at Nagoya Institute of Technology. Without the one year I spent with them, I suspect I would not have been able to finish this thesis at all. By teaching me how they saw the world they showed me countless things that I had been blind to just because I had taken them for granted. I am sorry for all the trouble I have caused, and I want you to know that I value your friendship beyond measure. You have helped much more than you can imagine. You know who you are.

A man is nothing without his friends, and I have had the greatest of blessings to have had the company, encouragement and challenge of many good friends, who helped me during writing of this thesis by taking pictures, engaging in long philosophical debates, helping me with the translations, and finally with the spell checking. I thank you too from the bottom of my heart, for without you I would not be half the man I am today. You too know who you are.

I must also thank my teachers in martial arts, who have given me a whole new world through which to inspect this one. The world in which they dwell is an ancient one, and it holds great wisdom of past ages. Graciously they have let me glimpse at it, to experience it, and to enter it. I cannot know for sure, but I suspect that they understand how meaningful their teachings and friendship has been to me far better than I do. I wish for their continued guidance in this world and the next.

Last, but definitely not the least, I thank my family, who always engaged me in the form I needed the most. Encouraging when I was feeling down, harsh and critical when I was feeling arrogant, and most importantly, always having absolute faith in me no matter what kind of foolish stunt I have been trying to pull. I could not ask for a better family even if I tried. I want to thank them profoundly, but words escape me. Since I cannot think of an expression befitting my feelings, I think I'll settle for what I have always done, and let actions speak louder than words. To you all!

本当に有難うございました！

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